THE CULTIVATOR.

THIRD] TO IMPROVE THE SOIL AND THE MIND. [SERIES.

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J. J. THOMAS, ASSOCIATE EDITOR, UNION SPRINGS, N. Y.

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Contents of this Number.

Editorial Notes Abroad.

No. XXXVIII---Farming in the Valley of the Clyde.

The public notification through our advertising columns of another Annual Sale at "Woodburn Farm," away among the blue-grass regions of Kentucky, is a forcible reminder that this Correspondence has never recorded the writer's past indebtedness to Mr. ALEXANDER for a visit at "Airdrie House," in busy and fertile Clydesdale. In 1859, just as the eager southron sportsmen were availing themselves of August 12th for a raid among the grouse,—a brief excursion in the Highlands, the notes of which were given in No. 15 of these letters, came to its conclusion at Glasgow; and the next morning found me some ten or a dozen miles to the north-west of that stirring city, strolling through the grounds, just adjacent to Airdrie town, which form the Scotch estate and residence of our noted Woodburn breeder. Now mostly laid down in pasture and rented, for the benefit of milkmen and others who find a market in Airdrie—a place numbering, I think, a population of twenty-five or thirty thousand—the manager, Mr. HENDRIE, was nevertheless thoroughly conversant with the system of general farming in vogue around, and in the discussion of Agriculture and Mining, the day passed only too rapidly away. Some rambling notes then jotted down, are perhaps still worth the space they will occupy, although submitted with some hesitation after such an interval of time.

Mr. HENDRIE, Jr., had lately entered upon the farm of Kirkwood, by Coatbridge. This farm had all been drained at distances of 15 feet, and a depth of from two to three feet—costing about £10 per acre (Scotch—nearly 1¼ acre English)—the 2-inch pipe tile costing 18 shillings sterling per 1,000. Liming the land is here highly thought of; a dressing of eight loads of 12 to 15 cwt. each, being applied per acre, followed by a light plowing, (say 4 inches,) when a spreading of dung is given, and a second plowing which again brings up the lime very nearly to the top. The effect was said to be greatest upon grass lands, and to be perceptible for a dozen years or more. The rent paid here is £2 10s. per Scotch acre. The rabbits are found exceedingly troublesome.

An approved rotation mentioned, was, 1, beans sown broadcast; 2, oats also sown broadcast; 3, green crop, potatoes and turnips, or possibly summer fallow; 4, wheat, sown with seeds in the spring; 5, hay crop, and, 6, pasturage, which is continued sometimes also for a 7th year. The land is mostly laid off in "riggs" of about 15 feet width. Manure is commonly applied on the lea, sometimes remaining spread for some time before the grass is

plowed in, and also with all green crops. A farm of 130 Scotch acres will keep perhaps 12 or 13 milch cows and feed some cattle, beside sheep. Pasturage generally extends from 15th May to 15th November. With regard to cattle-feeding, Mr. H., Jr., mentioned in answer to my inquiries, having purchased 10 head the 1st Nov. previous at £10 each, which were sold at £17 10*s.* per head after 3½ months feeding, and he estimated the value of the manure from each as 30*s.* more. The rate paid for labor is 12 to 14 shillings sterling per week, or for the best £12 and board per half-year.

One custom in this part of Scotland was alluded to, which resembles very much our own "raisings" and such other neighborly assemblages;—when a new tenant enters upon a farm, all his neighbors around come together to *give him one day's plowing.* Thus when Mr. Hendrie took Kirkwood, a forty acre field was all plowed by his neighbors in a part of a day, no less than 68 plows I think having been present at one time—a manifestion of good will which must have been very gratifying in itself, as well as from its rather unusual extent. This was one of those cases to which I had reference in remarking heretofore, that there seemed to me to be many points of resemblance between the farmers of America and Scotland.

The farmstead at Kirkwood was new, and a brief description of it will convey an idea of what is there thought to be a first-class modern establishment for a tenant. Mr. BUCHANAN, the landlord, had perhaps manifested in the present instance, however, a greater degree of liberality than might have been the case upon a farm of moderate size, with an occupant less favorably known.

The dwelling and farmstead are connected in a sort of hollow square, there being less objection to such proximity in Scotland than there would be under our hotter suns. I was kindly furnished with drawings of the whole, but shall be able to make myself understood, perhaps, without having them engraved. The size of the house, which has two stories and an attic, is 42 feet front by 26 deep, with a neat elevation looking to the southward; the entrance in the centre, with parlors on the west, and dining room, &c., on the eastern side. Set back 15 feet from the front line of the house, there is a story-and-a-half wing on each side, 13 by 13—that on the east containing the kitchen, with entrance from the rear, and connecting by pantries, &c., with the dining room. A projecting addition at the rear of the dwelling contains the library and office, overlooking the whole farmstead, with wash-house, &c., in the basement.

Beyond the side wings, the elevation shows the gables, on either hand, of the range of buildings forming the sides of the hollow square alluded to—having a front of 24 feet, and a depth of 105—and thus making the whole front elevation 116 feet in length. Following along the eastern side we have in succession, connecting with the kitchen already mentioned, laundry and servant's room, then the milk room, and scullery or churning room. Then come the cattle, occupying the remainder of this side—first with stalls for 18 cows, having a centre passage opening from the scullery; then the "queys' byre," or stalls for heifer or other young calves, and the extreme northeast corner occupied by a root house and loose box. The loft along this range is used for hay or straw

We now come to the northern side of the yard, in the centre of which is the gateway, 12 feet wide, for entrance and exit of teams, and on the left an open shed 12 by 26, while on the right are ranged the poultry house, a tool room, and the pig house and feeding boilers.

The buildings on the west side, which now alone remain, contain a cart shed 21 by 21, at the extreme end, and next the chaff, grain and thrashing rooms, the last being fed from the upper floor of a projecting building at the corner, 18 by 12, the basement of which contains a stationary engine. Then come the barn for straw, &c., and one or two loose boxes; and the range of horse stables brings us again to the front, connected to the dwelling by the 13 foot wing noted above, which is occupied with sleeping apartments for the men. The size of the court-yard within, must be about 68 by 75. West of the buildings, is the stack-yard, and, directly in the rear of them, extensive manure pits, to which the cleanings of all the stables are carted, and their liquid drainings carried, if memory serves me, through an underground piping. Here there were to be also, I believe, additional pig pens, and cattle-yards, together with water tanks filled from the roofs, &c.

It will readily be seen how great the convenience of such a series of buildings must be, constructed in the best manner, and including everything almost under a single roof. If the same strict attention was paid to cleanliness, we might suffer no inconvenience even in our warmer climate, from having farmstead and all thus compactly arranged. Those who have visited "Thorndale," for example, will understand that neither the inclosed yard nor the buildings *need* offend in any way eye or nostrils; while the former, with the central fountain it may be made to contain, in the midst of a tidy, well-gravelled surface, will present an appearance rather attractive than otherwise. As to convenience—here are, dining-room, kitchen, laundry, dairy, in immediate succession, as we have seen—the milch cows, calves, root room, poultry and pigs, following along in the order named—on the one hand; and, on the other, the farmer's office, the apartments of his men, and then his horses, succeeded by grain barns and thrashing apparatus and adjoining stack-yard, connecting lastly with store rooms for vehicles and implements, granary, sheds, &c. And there seems very little left to desire, when after crossing a roadway in the rear, we come at once among the other cattle and out-buildings, and witness the careful arrangements for the preservation of the manure. I cannot think but that our farmers might derive some useful hints from such a farmstead, and it is in that conviction that I have devoted so much space to render the disposition of all its details as clear as possible. If farther information upon any point is requested, I shall be glad to furnish it if I can.

L. H. T.

[For the Country Gentleman and Cultivator.]

"WHY DON'T THE BUTTER COME?"

I have milked from four to six cows all winter, and the butter has invariable come as quick as desirable. The milk for the day has been scalded in the evening by placing the pan over hot water on the stove, and when a sufficient quantity of cream was collected for churning, it was warmed just enough to have the butter of the proper consistency for working and salting when the churning was finished. How much to heat the milk is easily learned by experiment. If scalded too much, the amount of cream will be diminished, while just the proper degree will increase it.

I had almost forgotten one important item; the milk was kept in a warm room, and open to the air.

Ashfield, Mass. WM. F. BASSETT.

Farming Operations---Advice about Plowing.

We propose to avail ourselves of a series of articles lately contributed for the New-England Farmer by our occasional correspondent, Hon. Frederick Holbrook, to present, in condensed form, the advice and information furnished by him in response to the various inquiries of an intelligent beginner in farming—an old friend of Mr. Holbrook's, who proposes, as we understand, to devote the remainder of a life thus far engaged in other occupations, to the management of a farm, "provided the capital thus invested can be made to yield a fair return."

I. Compost for Corn Land.

Swamp muck, when more convenient to the proposed cornfield than to the barnyard, may be composted there to save hauling—the heaps of compost at such distances in the field as may be easy for distribution, 30 to 50 loads in each heap—composed of alternate layers of 4 to 6 inches of swamp muck and farmyard manure.* "The piles should be laid up as lightly as possible, and the height should not be more than about five feet, lest the bottom courses should be too much compressed to heat and ferment well"—the object being to sweeten and decompose the muck, as well as ferment the manure; and if properly laid, the piles will soon begin to heat. Mr. H. has "made up heaps of this kind as late as the 10th or 15th of April, overhauled them in two or three weeks after, and had them fit for use by the 10th of May," and the labor of this "overhauling," or shoveling over the piles 10 days or a fortnight before they are used, he considers amply repaid "in the superior fineness and effectiveness thereby imparted to the manure. He thinks it also "far better economy to compost green manure than to use it to any great extent alone."

"At the suitable time in spring, plow your greensward nine or ten inches deep, say with a sod and subsoil plow, if the land is free enough of obstructions to permit the use of that kind of plow; if not, then use a large enough plow of the common greensward form, to accomplish that depth of furrow. The plowing should be accurately and nicely executed, making the furrows meet and match well, and shutting the sod down beneath, securely out of reach of subsequent tillage. Then spread the compost broadcast on the surface of the plowed land, putting it on as liberally as your heaps will allow; plow it in about four inches deep, with a light, sharp plow, guaged to the right depth by a wheel on the beam. This incloses the manure perfectly with mellow earth, which, by its mellowness, absorbs and holds the goodness of the manure, and yet the compost is in a situation to be immediately, as well as at all other times, available to the growing crop, and to receive suitable atmospheric influences to promote a perfect decomposition, and to enliven and improve the upturned soil."

II. The Management of Swamp Muck.

1. Drain the swamp by a ditch as deep as the deepest portion of the muck, leading on to ground low enough to carry off the water.

2. Ditch around the particular piece you wish to dig; cart out to dry land at pleasure, and endeavor to get it there so that it may lay exposed to the air a twelvemonth before it is used for compost.

3. What is wanted for barn-yard use, should be spread in autumn, in sheds and elsewhere, 4 to 6 inches deep, to catch the droppings, liquid and solid; subsequent layers not quite so thick, applied two or three times in winter, and several weeks before planting time in spring; it will pay well for the labor to draw out into heaps in the fields to which the compost is to be applied, 25 loads or more to the pile, that a further heating and pulverizing process may take place before its final application.

4. If a water tight trench can be conveniently made behind the cattle in the stables, "say 20 to 24 inches wide, and 4 inches deep," about a bushel of dry muck to each animal can be used advantageously through the foddering season, by putting it daily in this trench—throwing it out with the wet portions of the litter, under a deep shed opening to the south, or into the celler—thus manufacturing your compost from day to day, and making "superb manure for almost any purpose."

5. Horse manure, which is very active and volatile, may be preserved "from injury by overheating or loss by evaporation," by being deposited in a cellar or covered pen, frequently throwing muck upon it, and letting a few swine work it over.

6. Excellent composts for top-dressing grass land, or for fruit trees and shrubs, may be made of dry muck and "unleached ashes, using two to four bushels of ashes to a common cart buck load of muck, mixing the pile in thin layers at a time of each, and shoveling over once before using;"—or, "compost the muck with lime, dissolving a bushel of salt in water enough to dry slake about five bushels of lime, and then using one to two bushels of lime to a cart load of muck."

III. Deepening the Soil.

1. Almost any soil may be made to reach "a certain medium degree of excellence," but in going beyond this, much will depend upon what sort of subsoil there is beneath it; it may be too open or gravelly to retain moisture or manures, or it may contain poisonous qualities to the roots of plants. The soil may be deepened at little cost and to great advantage when it is underlaid "with a strong unctuous, fine-grained subsoil of loam or of clay loam, that holds fertilizing matter well, and on suitable exposure to the atmosphere slakes or disintegrates willingly, so that it is susceptible of a fine mellow tilth."

2. A subsoil of this kind, "brought to the surface by deep plowing, enlivened by atmospheric influence, high manuring and thorough cultivation, and mixed with the older surface soil," will give better tilth and increased production, the land "better withstands the peculiarities of a too wet or too dry season; the roots of vegetation have a stronger hold upon the soil, and the crops are not so easily injured by winds and storms; the manure may be suitably inclosed in mellow earth near the surface, where it has a greater and more lasting effect upon the land; and when the land is laid down to grass, it holds out longer in productive mowing, because the roots having a deeper range, do not so soon become entangled in a web near the surface, and the sod is not so soon 'bound out.'"

3. With a dressing of 25 loads of compost per acre, it would be safe to plow eight or nine inches deep where such a subsoil is turned up—with 40 loads per acre, still deeper—supposing that six or seven inches was the maximum depth previously attained. This is going down two or three inches at once; but if the "subsoil is poor, or inclined to be sandy or gravelly, and the surface soil is loose and hungry, the process of deepening must neces-

* "With horse or sheep manure, or other strong stable manure where grain or roots have been fed to the stock, you may put at least two parts of muck to one of manure; but yard manure, being coarser and not so strong and active, will not bear more than equal parts of muck with it. In either case, however, somewhat larger quantities of muck in proportion to manure may be used, provided the muck has previously lain a year or more in pile on dry land, to drain, disintegrate, and in a measure part with its acidity.

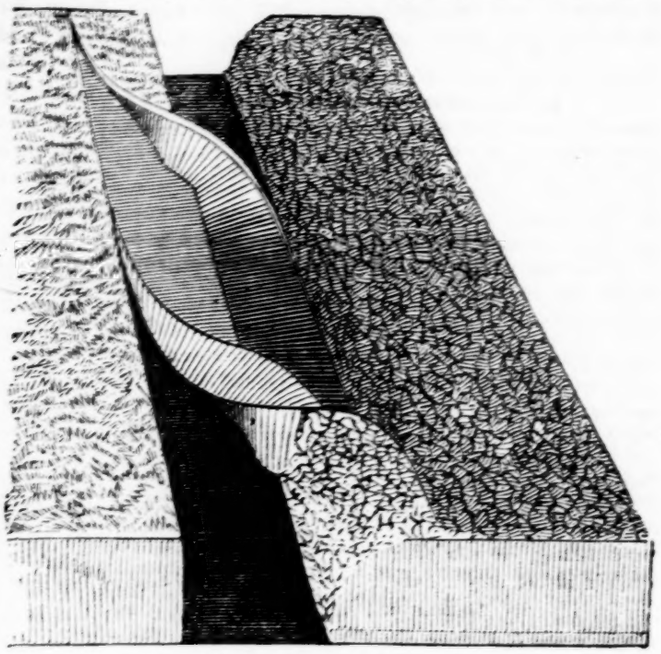
earily be more gradual, bringing up not more than an inch or so of the lower soil at each rotation of crops, and manuring that generously."

4. As in all other operations, good judgment must preside over one's attempts to deepen the soil, "and the particular circumstances of the case in hand must temper and govern the action. Where deep plowing is to be practiced, it is usually desirable to do it in the fall, and give the upturned subsoil the benefit of exposure to the action of the weather till the following spring. The common grub-worms and the cut-worms are a good deal disturbed and cleared out of the land by late fall plowing. But fall plowing is not absolutely requisite, and if convenience were better consulted by plowing in the spring, it may be done then with success."

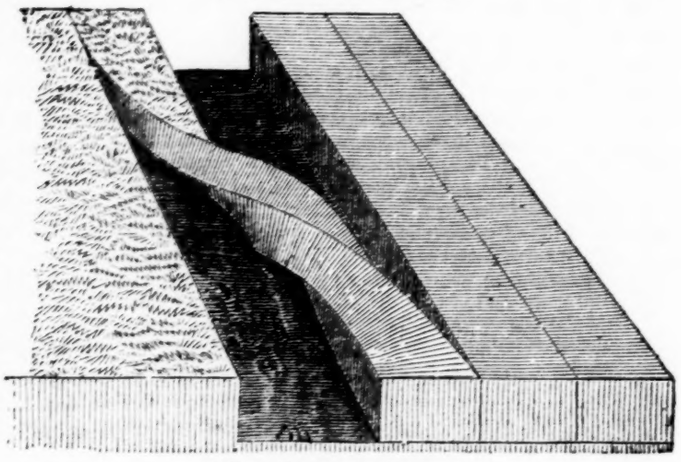
IV. Different Kinds of Plowing.

After observing very justly "that the mould board of the plow is a perfect and beautiful mathematical problem," Mr. Holbrook describes, with illustrations, the four different kinds of plowing, which a skillful plowman can perform, he thinks, with nearly the accuracy that is shown in the figures. We are indebted to him for the use of the cuts, and we quote his accompanying remarks with slight condensation:—

1. Sod and Subsoil Plowing.—This kind of plowing requires two plows upon one beam. The forward or skim plow should take a depth of not more than two or three inches, dropping the sod accurately into the channel, grass side down; and the rear plow should lift the remaining depth or under soil, raising it high, and laying it handsomely over the sod or skim furrow-slice, and well matched up to the previous furrow, breaking the soil well in the act, and leaving a clean channel behind for the reception of the next furrows. When a well-constructed plow for this kind of work is accurately adjusted as to the line of draught, and held so as to cut a uniform width and depth, and turn up the rear furrow slice to meet fully the preceding one, as represented in the cut, the upturned soil is laid over in a remarkably light and pulverized condition, making a very level and finely cracked and open seed-bed or tilth, superior to what can be done with any other implement yet introduced, and indeed superior to what the most accomplished spadesman could do in grass land by hand labor. For the deep breaking up of sod land, I would recommend the sod and subsoil style of plowing, on all such fields as are free enough of obstructions, and have sufficient regularity of surface to admit of the use of a double plow. Deep plowing is done with lighter draft to the team by this mode than by any other, because you can plow quite a narrow furrow in proportion to depth—say ten inches deep, by eleven or twelve inches wide, while by other modes you would be obliged to carry at least from a third to a half more width than depth to turn the furrow surely.

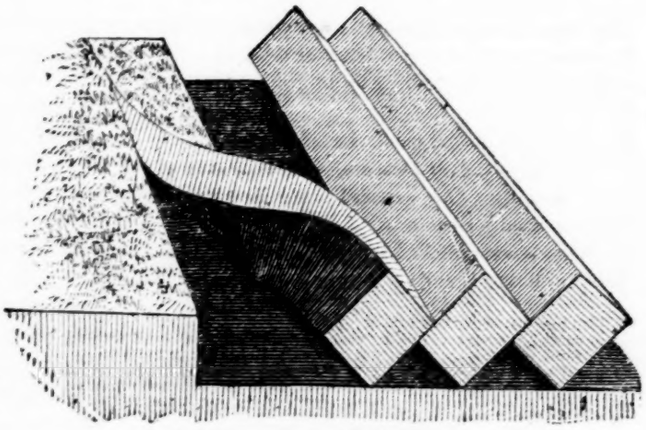


1. Sod and Subsoil Plowing.



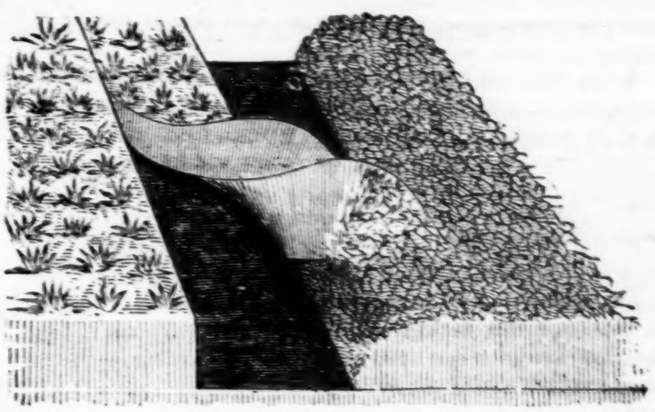
2. Flat Furrow Sod Plowing.

2. Flat Furrow Sod Plowing.—For the breaking up of bushy, rooty or uneven pastures, or any other grass land, when there are too many obstructions, or the surface is too rough, or the sod is too stiff and rooty with wild or swamp grasses for the safe and effective use of the double plow, the single or flat-furrowed greensward plowing is the better style. The accompanying cut shows at a glance the proper flexure and movement of the greensward flat furrow slice. For perfect plowing, with the lightest practicable draft upon the team, the furrow slice should have an exact mathematical curvature and equality of twist throughout its entire passage over—as is represented in the cut. It should be the effort and pride of the plowman to be able to adjust his line of draft, or his



3. Lapped Furrow Sod Plowing.

hitch to the plow, so as to have it meet the peculiarities of the movement of the team—no two teams hardly ever drawing a plow exactly alike—so that his plow will readily take the precise right depth and width of the furrow, and hold easily in it, and so that he can perfectly and instantly control, or vary the bias of the plow, to meet the peculiar lay of the land anywhere, and bring the furrow slice over handsomely into its place, and preserve the perfection of his furrows. These little tricks and arts of the true plowman's trade should be learned by every one who pretends to hold a breaking-up plow, and surely no good farmer can consider them beneath his attainment. For your rough or unsubdued sod land, you will do well to plow the flat sod furrow, using a plow of sufficient strength and capacity for a team of four horses, or oxen, when required, and carrying a depth of furrow of 8 to 10 inches in good style.



4. Stubble or Old Ground Plowing.

3. Lapped Furrow Sod Plowing.—The annexed cut shows the proper movement and position of the lapped sod furrow. This is a style of plowing much practiced in Great Britain, and in some sections of our country where the soil is a stiff clay. As the cut shows, there is a little air space, or drain, under each furrow-slice, and the projecting angles of the surface of the plowed land present the stiff clay soil favorably to the action of the harrow or other surface-working instrument, for the raising of a fine tilth or mellow seed-bed. To execute this mode of plowing in perfect style, the furrow-slices must not be cut more than one-third wider than they are deep, for if they are, they will not stand at a steep enough inclination, or rather at an angle of forty-five degrees, which is the best inclination. The usual proportions of furrow-slice among finished plowmen, are about 6 by 9 and 7 by 10 inches. For a new country, where the land has not yet become cleared of obstructions nor its surface much smoothed, this is a difficult style of plowing to execute well, and indeed it is better adapted to an old than a new country. For plowing more than seven inches deep, the sod and subsoil style of plowing is preferable, even in clay land, being easier of good execution, lighter in draught, and requiring less width of slice than even the lapped style, and therefore making a finer tilth of the clay.

4. Stubble or Old Ground Plowing.—The annexed cut shows the proper style of stubble or old ground plowing. The furrow slice should have a short decided twist, be raised in turning, for the more effectual covering in of the stubble and other trash, and be turned quickly and strongly, so as to force the soil all over to an inverted position, breaking it fine in the act, and leaving a clean channel for the reception of the next furrow. This is the kind of stubble plowing you want. I have seen stubble plows at work of such construction—raising the earth so high, turning it so forcibly, and withal in such a sort of spray from the rear of the mould board, that you might lay down a full-sized bundle of straw or stalks, and passing by it with the plow cover it entirely out of sight with a single furrow. You can readily see on comparing the cuts, that the long, gradual, easy twist of the green sward furrow-slice, is not adapted to good stubble plowing, nor is the short abrupt twist of the stubble furrow slice, at all suitable for easy, handsome and effective, green sward plowing. Each requires its own peculiar form of plow to produce the best effect.

V. Cultivation after Plowing.

1. After the deep plowing, and just before planting time in spring, spread your compost manure upon the plowed surface and turn it in four or five inches deep with a light plow guaged to the right depth by a wheel on the beam. Plant the land with corn or other hoed crops.

2. If you have leisure after harvest in the fall, and if not, then in early spring, run a heavy harrow over the field, once in a place, and straddling a corn row each time, pulling down the corn-hills and scattering the stubs so as to facilitate their complete burial out of the way. Plow the ground preparatory to seeding it, turning it an inch or two deeper than you did in plowing in the manure, so as to bring the manure near the surface, and still with an inch or so of earth above it to protect it from loss.

3. Then stock the land to grass, with grain. Wheat and barley are the best grains to seed with, as the grass is less liable to be smothered by those crops than with oats. But if oats are a more profitable crop to raise, then stock with that grain, sowing, however, not to exceed two bushels of oats per acre. They will then tiller out enough from the root to grow all the seed-bearing stalks you need for a good crop, or that will be well for the young grass, and yet there will be room on the surface of the ground for the grass to get a sure foothold.

4. If you would like to improve more land annually than you care to plant, and can devise means for enriching more, then plow up grass land with a deep furrow in August, manure on top of the furrows with fine rotten compost, harrow in the compost, and seed at once to grass, with or without a crop of winter wheat or rye, as may appear to you best.

5. If the land is not subject to standing water at any time, and is a little rolling withal, you may perhaps succeed in raising a fine crop of wheat. If a grain crop is to be taken off the land, spread a heavier coat of manure than if grass seed alone is to be sown. Fifteen to twenty loads of manure for grass alone, will be as good to the land as twenty-five or thirty loads if a grain crop is taken off. Sow only herds grass and red top in the fall or in August, and put on clover early the next spring.

Conclusion---Capital in Farming.

From Mr. Holbrook's concluding paragraph, we condense the following excellent advice:

1. In connection with abundant supplies of swamp muck, all the manure should be made which the farm will profitably produce, in order to mix with the muck, thus increasing the compost heaps.

2. Study to find ways for feeding out the products of the soil upon the farm, so as to get about as good returns for them in the growth and improvement of stock, the wool, meats, dairy products, &c., as though they had been sold off for cash. Thus you will give back to the farm the manure its crops can make, increased withal two or three times in quantity, by judicious mixtures with it of your muck, and any and all other available vegetable or earthy substances which contain fertilizing qualities.

3. Where one has capital, he will see times when he can even buy oil-meal, or some kinds of grain, and feed it to his stock at a profit, besides enhancing the strength and activity of the manure. If such opportunities occur, you are able to take advantage of them, and thus in turn increase your own farm products in these articles.

4. With capital, moreover, you can take advantage of times and seasons, buying or selling stock, &c., at the right time, and some years feeding more, and other years less stock, according to circumstances. Even a small floating capital to use at will in farming, is oftentimes a decided help towards success in the business, making, perhaps the difference between a profit or a loss on a crop.

[For the Country Gentleman and Cultivator.]

ENDLESS-CHAIN HORSE-POWER.

J. B., who inquires about endless-chain horse-powers and thrashing machines—page 208 of Co. GENT.—appears to be in as great a quandary as I was when I first commenced farming. But, I trust, his doubts and fears can be readily removed.

There always has been in this town, a very great prejudice against endless-chain horse-powers; and they have been so denounced, by men who go about the country with the large eight and ten-horse sweep powers, thrashing and sawing wood, that farmers are really afraid to have anything to do with them. But in the towns adjoining the one in which I reside, where there are better and more economical farmers in every respect, the endless chain powers and the thrashers are so numerous, that a ten-horse sweep-power is seldom met with.

To give you an idea of the prejudice against this kind of horse-powers, I will state, that when my power, which is in good order, was set up last week at auction, no one would bid any sum on it, and so we were obliged to pass by it.

The great cry against them is, "they are a notorious horse-killer." This little short sentence embraces the whole objection and argument against them; and I do not fear to say, boldly, that *it is no such thing.* The prejudice is totally groundless, and the conclusion a very wrong one; and I can prove it to the satisfaction of any man who will not be, or has not been, swayed by prejudice.

My Experience with Endless-Chain Powers.

In the year 1846, I purchased one of Wheeler's one-horse powers. With horses which weighed about eight hundred pounds each, with a very poor thresher we could thresh with ease seventy or eighty bushels of wheat per day, and more than twice as much oats. When sawing fire-wood, three men would saw about one cord per hour, and with the saw that I now have, the same horse and hands would be able to do double that amount. Besides threshing and sawing fire-wood, I used this one-horse power for driving my turning lathe, grind-stone, fanning mill, straw cutter, and for slitting lumber of all kinds for my buildings, and sawing lath, &c.

Not being exactly satisfied with a one-horse power, in 1853 I made a two-horse power of the one-horse power by cutting the rods in two and welding in a piece of rod, so as to make them longer, and by making a new platform. Now it works most complete. I can saw three cords of wood per hour with two horses, with a circular saw; and with a drag-saw, with no help but a boy ten years old, I sawed off logs twenty-six inches in diameter in seventy-five seconds per log, including starting and stopping time; drive my grist mill, clover machine, and horse corn sheller, with which we can shell, clean and deliver in the bag, ready for market, seventy bushels of shelled corn per hour; and by driving business a little, we could do more than this. But this is ordinary work with an ordinary elevation of the power.

Two years ago I had a good crop of barley, and could not get it half in the barn; and so we would haul a load to the barn, and put the horses on the power, and thrash it about as quickly as we could pitch it up into the mow, and with the same help that was necessary to merely unload it.

For several years past I have raised more or less buckwheat, and by having a horse power and thrasher of my own, I was enabled to get my buckwheat all thrashed before my neighbors had really thought of thrashing theirs. Last fall was a very unfavorable autumn for securing buckwheat; but as soon as the buckwheat appeared at all dry we could thrash; while my neighbors lost full one-half of their crop before they could possibly get it thrashed. But this is not all. As my buckwheat was secured before it had become water soaked, it would make much better flour, and millers were willing to pay from four to five cents more per bushel than they would pay for that which had been exposed to storms for several weeks.

My thrasher stands on the second floor of the barn, and the grain falls on the first floor. Therefore all the help that is needed is a boy to keep away the straw, which a very small boy does with ease, and one to feed, and one to pitch the grain off the wagon. As a general thing, I thrash my grain in the winter, when we have but little to do, and when we can use up the straw economically.

A few years ago, as my father-in-law was accustomed to thrash all his grain, and saw all his wood by hand, which kept them worked down all winter and spring, I induced his son, against the remonstrances of his father, to purchase a two horse power and thrasher.

The result was, it removed, most effectually, all their prejudices and doubts, and fears lest it would not pay, and they were enabled to do their thrashing and sawing wood in a very short time, without working like slaves, and he soon earned enough, working for his neighbors, to pay for the machine. There are two sweep powers for sawing wood within half a mile of him, and while they are able to get a few jobs, he has more than he can saw. He makes from $3 to $4 per day, and does not work very hard at that. I should hardly know how to get along on a farm without a two-horse railway power. S. EDWARDS TODD.

[For the Country Gentleman and Cultivator.]

COMPOST OF POULTRY MANURE.

MESSRS. EDITORS—Being myself deeply interested in anything pertaining to agriculture, I send you a bit of my experience in making a small quantity of manure go as far as possible, it being the farmer's aim on a poor piece of land to use his manure to the best advantage.

I made a compost of hen manure, night soil, stable manure and earth. I kept it in my hen-house. When I shoveled it over from time to time, I wet it with the suds from the washroom which kept it moist, so that all the hard lumps became soft and easily mixed.

When my ground was ready for planting, I first went along and dropped a handful of the compost, then dropped the corn on it. And to try if it was going to pay me for my trouble, I skipped two rows through the fields, and as a consequence, where I put none of the compost the corn looked nearly as yellow as the corn I planted, while the other looked nice and thrifty. The difference was very plain to be seen, not only while growing, but when harvested. It proved quite a paying experiment to me.

Fairfax, Va. F. V.

[For the Cultivator and Country Gentleman.]

How to Grow Apple Trees at the West.

MESSRS. EDITORS—I have thought I would say something in regard to the cultivation of the apple tree. I have been engaged in that business for the last five years. I am now in latitude 37. I have 42 varieties in my orchard, and I deny the statement of many writers, that there are some varieties that will not grow well at the west. My trees are all cared for alike, and with one exception grow alike. The Summer Rose grows slow but thrifty. If those who wish to have orchards in this western country, would spend more time in the care of their trees than in the abuse of nurserymen, we should have fine young orchards. I know men who bought their trees when I did, that have not got a tree now. My plan is to plant my trees 33⅓ feet apart, and use nothing but surface soil in planting. I mulch in March with straw manure—use soap twice a year, in May and September—head my trees low—fork twice a year, in July and December, and keep all weeds down under my trees, and keep out all animals but hogs. When one year set, I mulch with lime, taking care not to let the lime come close to the trunk. With this care, the country will soon be full of fruit. My soil is a sandy loam, with lime-stone clay subsoil. I have trees measuring four inches in diameter, five years set, with tops that will bear one bushel of fruit. WM. M. JEFFREY.

Oak Hill Nurseries, Ill.

[For the Country Gentleman and Cultivator.]

Old Corn vs. New Corn---Food for Hogs.

We are compelled to dissent from what we understand to be the statement of J. M. CONNER, as quoted in the COUNTRY GENTLEMAN of 10th January. If we do not understand his statement, this writing may have the tendency to bring unknown facts before our minds. We are always grateful for knowledge. Knowledge is a farmer's power.

J. M. C. states that old corn is worth from 15 to 25 per cent. more than corn just harvested. Mr. C. evidently refers to corn "on the ear," and to the value of a bushel of old compared with a bushel of new. His meaning must either be that a bushel of old corn is worth so much more than a bushel of new, or that a given quantity of of corn gains in feeding value by "being kept over." If the former be his meaning, as we are inclined to think, then his general statement, that "all pork should be made from old corn" is not correct. Let it be admitted that the bushel of the old is worth so much more than a bushel of the new. This is not a fair comparison, unless we also take into account the per centages in favor of the new corn.

1. *Bulk.*—Many trials have shown that corn kept over will lose from 25 to 33 per cent. of its weight, ordinarily 25, but in some seasons, dent and hackberry varieties have lost 33⅓ per cent. So that to obtain a just estimate a bushel of new should be compared with but three-quarters or two-thirds of a bushel of old.

2. *Handling.*—Where wages are high the amount of labor required to crib any large quantity is no small item, and this must be placed against the old, as in fair weather new can be fed, and often is, at once from the wagon, thus saving a double handling.

3. Keeping over requires for large estates an enormous quantity of crib room.

4. The interest saved must also be put in the account in favor of the new.

Now as to the second view. Does corn gain in value by keeping over? If it does, this gain must result from some chemical change. Water is lost, most certainly; but the presence of this water in the new grain, enables the feeder to dispense with other liquids, or the same in other form. Does any chemical change enable the old to be more readily assimilated or more entirely digested? So far as our investigations have proceeded upon live weight, excrements and food, we have not been able to detect this more favorable combination. If others have, we should be glad to know it.

With J. M. C., we would condemn the too common practice of half-starving during the latter part of summer; and we have often seen this to be the case with those who thought they had enough old corn to last through. Most certainly enough old corn should be kept to supply any deficiency that may occur; it is well to have on hand more than enough at any time. But corn or no corn, no half-starving during the latter or any other part of summer should be permitted. We have found it well to turn our spring pigs—and for our own use we want no pork from a pig over a year old—upon good clover pasture, giving them daily portions of meal mush; thus until last of July, when the King Philip and other early kinds of corn are ready to cut up—then let it be corn, corn, with any other variations, such as apples, peaches, potatoes cooked, &c., as may be at hand; then with a good breed, such as the Chester or Bedford, and Suffolk or China cross, we may expect good pork and enough of it.

With such treatment, 1½ pounds per day of gain may be expected from feeding till killing time, if the breed will "take fat" and has "size." We have had a gain of three pounds per day for a time, and suppose that others have had greater, but such cases are the exceptions.

We have written this much with the hope of drawing out some of our hog men. We need more facts; we can know, and should, as much as the mechanic, work by rule, not by guess, fancy or whim. H. T. VOSE.

Camba, Jackson Co., Ohio.

[For the Country Gentleman and Cultivator.]

CURE FOR SWEENEY.

MESSRS. EDITORS—For the benefit of your readers I send you the following receipt for Sweeney. I have never had occasion to try it but once, when it effected a complete cure.

I am inclined to think that Sweeney frequently occurs without any previous injury, and that the injury, if there be any, is in the shoulder—also that the disease often continues after the cause is removed.

To three-fourths of a pound of bacon, add three tablespoonfuls of salt, (rock salt is best,) and what rosin will lay on the point of a case-knife three times, and the yolks of three eggs. Put your bacon on the fire and try it out; then add your rosin and salt, and simmer slow till it dissolves. Set it off and let it cool until you can bear your finger in it. Then beat up your eggs and stir them in until cold.

Apply once or twice a day, and bathe in with a hot iron. (Old lard will do instead of bacon, if the latter is not at hand.)

Will "J. S." and "W. S." please give this a thorough trial, and report the result. W. R. *Nebraska City.*

[For the Country Gentleman and Cultivator.]

RAISING WHITE BEANS.

After various experiments in raising beans, I have made up my mind that the following mode, which I have practiced the last few years, is the most economical, &c.

The ground should be worked with cultivator or otherwise, the last thing before planting, as it is cheaper doing it before than after planting. Then take a hand corn-planter, and set the hills about one foot or a trifle more apart. This can be done by marking, or with a little practice, can be done without marking.

The advantages are these—the hoeing can be done with about the same time to the hill, as after they have been plowed or cultivated; and then you can get about two or three hills, where you have but one in the common way, where planting is done with a machine. The plants are more compact in the hill, and consequently less labor to hoe and pull them. Cover from one to two inches deep. Four or five plants in a hill is better than more. Care should be taken to plant none but sound seed, as beans will sometimes have life enough in them to come out of the ground and then wither up. A. Moss.

Belvidere, Ill., April 4.

[For Country Gentleman and Cultivator.]

The Cultivation of Chinese Sugar Cane.

Select a piece of ground, situated in the warmest part of your farm, (that is the most exposed to the sun.) It should be plowed very deep, and harrowed well before planting, which should be as soon as convenient after plowing, because it comes up better when the ground is fresh. It is a very good plan to pour warm water over the seed the night before planting.

Plant very early in spring, in furrows about four feet by two, so that you can plow it when it gets up nearly full height. The leaves should be stripped off as soon as the cane commences to get ripe. It should then stand three days, and be made up.

We have tried several ways, and the best is to use kettles which will hold 30 gallons or smaller—strain the juice into the kettles—boil slow till the scum is mostly off—then crowd the fires, and never change syrup from one kettle to another. Some think that it will not make sugar. We have made some that was manufactured from cane of our own raising. It is very dark, and tastes like maple sugar. I think with improvement, we can make a very fine sugar from it. H. H. W. *Big Run, O.*

[For the Country Gentleman and Cultivator.]

The Maple Sugar Crop of Vermont.

MESSRS. EDITORS—The maple sugar crop of Vermont is one of the most profitable of any produced in the State; and there is probably no branch of the farmer's business that affords as much income and clear profit, according to the amount of capital invested, and the amount of labor expended in the manufacture of it. Only a small capital is required to carry on the business, and the labor is performed at a season of the year when no other branch of the farmer's business can be successfully prosecuted, so that it occupies a portion of his time which otherwise would be of little value for other purposes, and makes it realize more profit than that devoted to any other part of his business during the year.

The maple sugar crop of this State for 1857 was estimated at over 8,300 tuns; which is nearly half of the maple sugar crop of the United States, as returned in the census of 1850, and about one-eighteenth of the sugar crop of the Union. In this town there was an effort made in the spring of 1857, to ascertain the amount of sugar made in the town that spring; and the statistics returned showed that it amounted to about 200,000 pounds. The census was taken by school districts, and the following is an abstract of the reports:

School Dist.	Whole am't made.	Most made by one man.	Least made by one man.	Sugar lots in each Sch. dis.
No. 1, ...	12,800	3,500	500	9
" 2, ...	34,675	3,600	50	26
" 3, ...	20,273	2,000	200	21
" 4, ...	4,380	1,200	55	8
" 5, ...	17,874	2,994	20	12
" 6, ...	25,701	4,375	50	18
" 7, ...	3,000	900	200	7
" 8, ...	6,675	1,650	650	6
" 9, ...	10,400	2,700	400	10
" 10, ...	18,020	1,900	50	17
" 11, ...	13,600	2,150	500	12
" 12, ...	8,910	2,000	30 (2 trees.)	10
" 13, ...	4,578	1,400	20	8
" 14, ...	16,150	4,000	300	14

The sugar crop of 1858 was considerably less than that of 1857. The statistics of the crop for 1859 were again collected. These I have not access to, yet the following item published at that time in the Vermont Phœnix, gives a short abstract of the account: "During the past season there was manufactured in the town of Wilmington, 202,743 lbs., or over one hundred tuns of maple sugar, of which 34,115 lbs. was made in one school district. In one other district of 62 inhabitants, twelve tons were made. One man made 200 lbs. from twenty-five trees! Here are some figures hard to beat."

From what information I was able to obtain, I think the crop of 1860 exceeded that of 1859, although no exact returns were made. The crop for the present season I think will fall a little short of that of last year, though I have no doubt that it will amount to 200,000 lbs. The price of sugar varies according to the price of foreign sugars in market; this year it is lower than it has been for several years—last year it was higher. There is usually some four cents per pound difference in the price of sugar—according to the quality. This year it sold from 7 to 11 cents per pound. Some years it has been sold from 9 to 13 cents per pound. Small lots of the first sugar made in the season, generally sell higher than the regular prices. The principal part of the sugar sold is run in cakes of small size, and put up in boxes weighing from 50 to 100 lbs.—though for two years past, some have put it into tubs holding about 50 lbs. This is a much better way to put it up for family use than to cake it, as it is not made as hard, and when the molasses is drained from it, it makes a dry and convenient article for using in any way that is wanted. The most of the sugar is sold in the cities and large villages of Massachusetts, though there is considerable sold in Rensselaer and Albany counties, N. Y. Some of it goes to New-York to supply orders of private families, and last year some small lots were sent to Illinois and Minnesota.

A few figures will show the magnitude and importance of the sugar crop of this town at the present time. Calling the amount 200,000 pounds made annually, and it will amount to 140 pounds to each inhabitant in the town. Dividing it among the 14 school districts, it will give about 14,000 pounds to each district. Reckoning the price of sugar at 9 cents per pound, and it will amount to $18,000 for the town; this divided among the school districts, would give about $1,285 to each district, or nearly $14 to each inhabitant of the town. From the foregoing estimates it will be seen that this town has a reliable and unfailing source from which to obtain a supply of sugar for her own consumption, and a surplus to spare; and should it be necessary, the amount of sugar annually made could be largely increased, as the sugar orchards on many of the farms, have not as yet been fully worked. This fact is probably true of many of the mountain towns in this State, especially in those towns where the later improvements in the manufacture of sugar, have not been introduced. The ready sale of maple sugar for a few years past, and the prices which it has brought, I think are sufficient inducements for all who have the opportunity for doing so, to engage in the manufacture of this article, and thereby add to the wealth of the country, and to the amount of their individual incomes.

Wilmington, Vt., 1861. C. T. ALVORD.

[For the Country Gentleman and Cultivator.]

BLUE-POD AND PEA BEANS.

EDS. CO. GENT. AND CULT.—In your remarks upon Field Beans, No. 17, page 266, middle column, current vol. Co. GENT., reference is made to the blue-pod and pea bean; and, that you are not acquainted with the variety called blue-pod is stated, and should infer that the pea bean are not cultivated in your State to any great extent, or they would be quoted in the New-York "price current," and that you would not so nearly confound them with the marrowfat bean.

The blue-pod and pea bean are grown here for family use and the Boston market, quite generally—these and the marrowfat, probably more than all other varieties. There is but little difference in the cultivation of the blue-pod and pea bean; often they are mixed, and in fact oftener than otherwise, because many who raise them do not know or make any difference with them. They are both a bush bean; grow so much alike one would not scarcely notice any difference, unless comparing them, or well acquainted with each variety.

They are almost exclusively grown between the hills of corn, being small stalked, and not till grown several years upon the same soil, and at that—without making any selection of seed to prevent it—do they twine around the corn.

If the land is in good tilth, and it is a good bean year, they may grow to one and a half feet high, but usually about one foot is the average hight.

Four to six beans in a hill, planted June 1st to 15th, after the corn is up, is a favorite mode with many, rather than to plant with the corn, because they are liable to get the start of the corn; and beside, if a hill of corn fails, two hills of beans can take its place.

In 1859, on land poorly dressed, it was not at all difficult to find single stalks which produced sixty to seventy-five pods, containing four to six ripe beans; and a friend found one hundred pods, averaging five beans each, on land well manured, of the pea bean variety.

They are A. No. 1 flavored bean, having no strong taste or smell, capable of being baked and set upon the table about as whole and in as perfect form as before cooking; and seldom splitting but little in thrashing and cleansing for market—ripening so evenly that no trouble is encountered on this account, but nearly all are perfect little beans.

The blue-pod, if any difference, is rather more liable to run or vine some years than the pea bean, but this is easily remedied by a change of seed or selecting seed from those hills which do not run. They yield about equally, but those who have tried them generally give the

preference to the pea bean because they are rather the most vigorous growers and command and the same price here, though inferior in flavor.

Many contend that they yield as well as the marrowfat, among corn, and being much easier cured, are preferred on this account. The marrowfat have large stalks and leaves, and split badly in threshing, and, if after they are nearly dried, a heavy rain comes upon them, they will burst open so that it spoils them for market.

The pea bean is nearly a round bean though a little longer than otherwise; yet, this may not seem correct because there are different kinds often seen, still they are pea beans. The blue-pod is a little, perhaps a quarter, longer than the pea bean.

Now Messrs. Eds., if this is not more beans than you want, if you wish, I will send some blue-pods for trial this year, to you. O. W. TRUE.

Elm Tree Farm, Maine.

[For the Country Gentleman and Cultivator.]

RAISING CALVES.

MESSRS. EDITORS—The raising of calves is a subject which particularly demands the careful attention of every farmer; for upon the manner in which the calf is reared, depends the value of the animal when grown. If due attention was paid to this branch of husbandry, much wealth would annually accrue to the country.

It is a very easy matter, by neglecting the calf, to make the cow worth ten or twenty dollars less when grown.

How many diminutive and undesirable specimens of cattle do we find all over our land, and yet were an inquiry set on foot relative to the manner in which they had been reared, in nearly every case the facts would be something like the following:

The calf was taken from the cow, and perhaps allowed new milk until learned to drink, then skimmed milk followed, (the quantity depending upon how many pigs were kept,) which shortly gave way to sour milk, followed quickly by total abstinence from all drinks except water, and sometimes only a partial supply of that.

The consequence of this *modus operandi* always is, that the growth and development of the calf are checked, and the size of the animal when fully grown, as well as its symmetrical proportions, are deficient.

Undoubtedly the best method of raising calves would be to allow them to run with the cow; or, if learned to drink, be supplied with new milk; but this method is too expensive for general adoption; therefore some method is required which shall be economical, and at the same time serve best to promote the thrift and development of the calf.

From experience upon this subject, I would recommend the following plan: Let the calf be taken from the cow soon after calving, and put into a *clean*, *airy* place, and supplied with new milk. In a short time it will begin to eat other substances, and may then be fed a little meal daily, and, as the calf increases in age, it will eat it more readily. The quantity of meal may then be increased, and the quantity of milk diminished, until the latter is discontinued entirely.

In this manner the growth and development of the calf are not retarded, and so gradual will be the change from the milk to the meal, that the calf will not experience the deleterious effects of weaning.

After beginning to feed meal, the calf should be placed in good clover pasture, and kept there through the summer, and the supply of meal continued. The calf should also have free access to water at all times.

The best meal for feeding calves, is perhaps a mixture of oats and barley or oats and buckwheat, or either or all.

The winter care of calves also demands much attention. They should be placed at the commencemnet of winter in warm apartments by themselves, and liberally supplied with good hay, a little meal, roots and plentiful supply of pure water.

In this manner, I think stock, which will be desirable in every point of excellence, may be profitably raised.

Wilson, N. Y., 1861. R. D. KNOWLES.

[For the Cultivator and Country Gentleman.]

LIGHT FOR FARMERS.

What shall we farmers use for lighting our dwellings? Camphene and burning fluid are considered so dangerous as to deter many from using them, and kerosene, which has been considered safe, has in several instances lately exploded, causing death; and the lunar oil is good for those who wish to convert their dwellings into lamp-black manufactories, as it will throw off lamp black equal to a small volcano, throwing out cinders, injuring everything in the room. Is there anying we can substitute for the old fashioned home-made dipped candles, that would be cheaper or better than them for farmers who have their own tallow? J. W. LEQUEAR.

The old fashioned candle, for ordinary use, and for those who are willing to be troubled with snuffing it once each five minutes, is cheapest, safest, and best. Dr. Jackson says that kerosene explodes in consequence of the presence of other volatile matter, which is expelled when the kerosene is properly manufactured; and that such as is explosive may be readily detected by placing a little in a vial, setting it in warm water (say 100 degrees Fah.) and placing a burning match at the mouth of the vial, after the lapse of a short time. A slight explosion will take place, if the kerosene contains unsafe ingredients.

An experienced housekeeper says that a good way to warm and light dwellings, is not yet discovered; but as many ingenious men are now engaged on the subject, possibly the child is born that may see its accomplishment; she thinks it safe to assert that the discovery will be made some time within the next three thousand years.

[For the Country Gentleman and Cultivator.]

DRAINING---No. 4.

MESSRS. TUCKER & SON—In my last letter on the subject of draining, published in Co. GENT. for March 14, I promised to give my experience in draining quicksands. The best manner, I have found by experience, is to take such lands when quite dry—say after haying and harvesting late, in August or early in September—when very little or no water is to be found at the depth you wish the drain—then put in what help is necessary to do the work before the rains come to saturate the soil, and the work can be done in a very satisfactory manner, without the running and caving process always attendant in such soils in a wet time. I have found that drains put in with tile at such a time are much better done, and are in no danger of filling with silt when the rainy season commences; besides it is very much nicer working in such soils in a dry time than in a wet one. I have tried to drain such soils in both wet and dry conditions of the soil, and have come to the conclusion that I would not attempt draining such soils only in a dry condition, and have found the drains put in when dry to work well. Care should be taken to have the fall carefully graded, so that the water will run rapidly to the outlet, and not have dead water standing in the tile at any place, or silt will collect and obstruct the passage of the water to the place of discharging the same at the outlet. I think the instruction given on the subject in the different soils mentioned, will enable any person to drain his land with economy—also that it will be well done, as I have some 50,000 tile doing duty without a failure, to my knowledge—also many rods of stone, and from the letters I have received since writing these articles, think some, at least, of your subscribers will be benefitted by their perusal. J. TALCOTT. *Rome, April* 30, 1861.

[For the Country Gentleman and Cultivator.

Remedy for Brown Bugs.

I will give you a remedy for the small brown bug which is very troublesome on our tomato plants. Take one or more shingles, according to the size of the bed—cover them with tar—lay them in different parts of the bed—then take a bush and brush on the ground from each end of the bed toward the shingles and they will hop on the tar, and once on they will stay there. A READER.

[For the Country Gentleman and Cultivator.]

No. 27---Disappearance of the Wheat Midge.

In the present communication I propose to consider the recent disappearance of the wheat midge over considerable parts of the country, and to relate the circumstances under which this event has occurred within the sphere of my own observation.

In the summer of 1859 it was reported that in Seneca county and other districts in the central part of our State, the wheat midge had vanished to such an extent that the wheat crop was sustaining no injury from it. I was inclined to be skeptical as to the correctness of this report, for here in the eastern section of this State I met with the larvæ of this insect in the heads of the growing wheat quite as numerous as they had customarily been in previous years, and the crop from several of the fields in my neighborhood on being thrashed was found to be materially diminished from this cause.

That this insect was still with us in full force was further evident from the flies coming in numbers about the lamps in our dwellings in the middle of June last, as narrated in my preceding communication. On thus seeing the parent insects so plenty at that time, I doubted not but that I should a month later meet with their progeny, the yellow worms in the wheat heads, the same as in former years. But on going to the wheat fields in July, to my great surprise, none of these larvæ could I find in any field within a circuit of several miles around me. As this was such an unexpected and important fact I was anxious to know if the same exemption prevailed through the country generally. As this insect originally came to us from the north, in the State of Vermont, just before the wheat harvest I made an excursion in that direction to a distance of fifty miles, inspecting every field of this grain which I came to along the road. And though, in consequence of the uncertainty of this crop since this insect has been in our country, the wheat fields which I passed were noticed to be small and far between, they were in every instance observed to be remarkably fine, the heads of the grain large and smooth, and in no instance ragged and torn by the yellow birds to feed on any larvæ nestling therein. And on opening the heads of every variety of appearance selected along the edges of several of these fields—for it is on the edges that these insects are most apt to occur—not a solitary larva was anywhere met with. Thus over an extent of country some sixty miles in length in Washington county, in this State, and Bennington and Rutland counties, in Vermont, I am assured, by careful personal observation, none of the larvæ of the midge were to be found the past season.

In the central part of the State, though the wheat crop the past season is reported to have been less productive than it was the year before, it is said to have received no injury from this insect.

It was circulated in the newspapers the last summer that in Canada West the wheat crop was remarkably promising, and was escaping from molestation by the midge, which insect had been subdued by a parasitic insect foe to it that had appeared in that province.

On the other hand, in Western New-York, particularly in the Genesee district, this insect continues to be as common as heretofore. Different persons residing in the vicinity of Rochester, whom I met at the recent annual meeting of our State Agricultural Society, informed me that they examined the heads of their wheat both last summer and the summer before, and found the yellow larvæ therein quite as numerous apparently as they had been in previous years. Yet they say the insect seems to have become inert, as though it was passing into desuetude, for it certainly has not injured the wheat crop the two past years as it has done before. We, however, cannot think these insects have really lost any of their energy. To rear a given number of them to maturity will probably require the same amount of nourishment one year that it does another. It is therefore more probable that some peculiarity of the seasons has so favored a vigorous growth of this grain that it has been better able to withstand and recover from the drawback it has received from this enemy.

It appears then, from what information we possess on this subject, that although the wheat midge still abounds in some sections, over a large extent of country it has become remarkably diminished within the past two years, and in some places has entirely disappeared.

Though I was unable to discover any of the larvæ of this insect the past summer, I cannot suppose it to be totally extinct in the district which I traversed. Scattered here and there in the wheat ears, so sparsely as to elude detection, it is probable that a few of these larvæ were present. But their numbers must be so extremely limited that it will be impossible for them to multiply sufficiently to do any appreciable injury to the wheat crop this present year. We hence obtain this important practical deduction from the facts stated—wheat may be sown this present spring, in this part of the country at least, with the fullest confidence that it will receive no detriment from this insect. I tell my neighbors they may safely devote as much land to this grain now as they were accustomed to do thirty years ago, before the midge invaded us, for, though other casualties may perchance occur to prevent so abundant a yield as we had the past summer, this most dreaded enemy will not trouble them to any sensible degree the present year.

What its future history is to be, time only can show. Genial seasons, or other circumstances favorable to it, may cause it again to multiply, and in the course of two or three years become as great a pest as it has hitherto been. But in view of the facts as they stand at present, I am inclined to think that in this country we have now had the worst of this insect, and that it will never again be so calamitous to us as it has been. I have heretofore, on different occasions, expressed the opinion that the career of this insect would be analogous to that of its predecessor, the Hessian fly, which, on its first introduction to our shores, gradually overspread the country, everywhere devastating the wheat fields for a number of years, after which it subsided, and has seldom since attracted any particular notice. And it appears to be one of nature's laws that when an insect is newly introduced into a country whose climate and productions are adapted for sustaining it, it immediately multiplies to a surprising extent, and thus usurps a place which does not belong to it in the arrangements of nature, and which it consequently cannot permanently continue to occupy. ASA FITCH.

[For the Country Gentleman and Cultivator.]

HOW I TREAT MY TURKEYS.

It may be interesting to some novice in turkey raising, to know my experience in that line. Two years ago this spring a neighbor sent me a present of eight turkey eggs, and as I had never raised any before, I looked upon the undertaking as gigantic. However, I gave them over to the care of a common hen, and resolved to find out something about the proper method of rearing them from some book or agricultural paper. In due time six turkeys made their appearance, and I commenced my practice at all hazards. I made a small coop with a tight roof, and in this I confined them nights and rainy days until they were half grown. In fine weather they had the range of a clover field, where they found a plentiful supply of bugs, and I fed them three times a day until four weeks old with corn dough mixed with water, adding to the dough, rainy days, a small sprinkle of black pepper. I also chopped up fine all the onion tops, which they ate greedily. I kept a pair over winter, and through the summer the hen laid 36 eggs, at three different times—from these, part having been broken, I reared 18 fine large turkeys, with the same treatment as above. Last winter I killed and sold all but five hens and two gobblers. I have already collected about 50 eggs, have 40 set, and hope to raise 100 turkeys this season. My turkeys are a very common kind, some entirely white, some quite dark.

Recapitulation.—To insure success in turkey raising, they must be kept perfectly dry while young, have access to plenty of bugs in fine weather, plenty of onion tops, and a little pepper in their feed in damp chilly weather. E. J.

Randolph Co., Ill.

[For the Country Gentleman and Cultivator.]

A CARROTTY EXHORTATION.

Brother farmers, receive a word of exhortation. *Carrots* is the theme. *Carrots* are not difficult to raise. *Carrots* like a rich, loamy, mellow soil, but *carrots* will grow on almost any soil, if it is well manured with fine manure. *Carrots* should be well cultivated—because they are CARROTS, and *carrots* will not grow where weeds are more plenty than *carrots;* therefore keep the ground mellow and the weeds clean from among the *carrots*. *Carrots* should be sown by the 20th of May, though it will *do* to sow *carrots* the first of June, if the soil is well adapted to, and the season favorable for the raising of *carrots*. To get a large crop of *carrots* from a small piece of ground, the rows of *carrots* should be 14 inches apart; but then the *carrots* must be worked out with the hoe. When *carrots* are to be worked out with a horse hoe, the rows of *carrots* should be 30 inches apart. The long *Orange carrot* is about as good a *carrot* to raise, as any other variety of *carrot*. From six to eight hundred bushels of *carrots* can be raised from an acre of ground, without much trouble.

Brother farmers, have faith in *carrots*. *Carrots* can be raised for ten cents a bushel, and *carrots* are worth 18 or 20 cents a bushel to feed to cows, horses and other stock. *Carrots* make very rich milk, and *carrots* improve the quality of the butter, as well as increase the quantity. *Carrots* are very healthy for all animals. *Carrots* are especially good for horses—a portion of *carrots* is undoubtedly better for them than all grain. Hogs love *carrots* if boiled—when prepared in this way, they will winter very well on *carrots*. Poultry are very fond of *carrots*, either raw or cooked—raw *carrots* chopped fine, are excellent for them in the winter.

Brother farmers, let me again exhort you to have faith in *carrots*. Five bushels of *carrots*, (300 lbs.) costing fifty cents, are worth as much to feed to stock, as one hundred pounds of shorts, costing one dollar. Four bushels of *carrots*, (240 lbs.) costing forty cents, are worth a bushel of corn or barley, or two bushels of oats, to feed—the price of the grain being uncertain—that depending upon who is President. Therefore, finally brethren, have faith in *carrots*—fit a piece of ground for *carrots*—sow *carrots*—raise *carrots*—feed *carrots*—and I think you will come to the conclusion that *carrots* are CARROTS, and that *carrots* are profitable to raise and feed. This has been my experience with *carrots*. The meeting is closed.

Jefferson Co., N. Y. J. L. R.

[For the Country Gentleman and Cultivator.]

CULTURE OF HUNGARIAN MILLET.

MESSRS. EDITORS—Seeing an inquiry in your paper, in regard to the culture of Hungarian Grass, I give you some of my views on the subject. I have raised and fed Hungarian hay ever since its introduction here, and consider it the best of fodder for horses, cattle or sheep.

Like corn, it delights in a rich moist soil; but still it will probably grow on as great a variety of soils as any crop we raise. The ground should be well plowed, and if very rough should be harrowed before sowing, to prevent covering the seed too deep. It may be sowed any time after sowing oats. I prefer not to sow until the ground is warm enough to give it a good start—say soon after corn planting. It should be sown on fresh plowed ground so as to give it the start of the weeds. It is sowed from one to three pecks per acre. I prefer about half a bushel. After it is sowed, it should be well harrowed in, and finished off with a roller or clod crusher, so as to leave a smooth level bottom for cutting. A clod crusher, made as described on page 267 of vol. 15 of the Co. GENT., is a good implement, and one which every farmer should have.

On good soil, three tons is a good average crop. It should be cut as soon as full grown and while the seed is in the milk, unless it is intended for seed, when it should be allowed to become fully ripe. It may be tramped out with horses or threshed in a machine, or small quantities may be threshed with a flail. It will yield about ten bushels of seed per ton of hay. The seed when ground, makes a good food for hogs, but I do not think it is very healthy for horses. W. R. *Nebraska City.*

[For the Country Gentleman and Cultivator.]

HOW I GROW MY CORN.

EDS. CO. GENT.—I commence with the intention of telling you how I raise corn, but before I tell how, I wish to give my way of managing manures, so that you can get the whole corn story.

I never plow in manures of any kind within one year from the time I spread them on the land. I use all my manures to top-dress with, either in the spring or fall, as suits my convenience.

In some cases I find it is better to draw out farm manure in the spring than in the fall, but in a majority of instances which I have tried, the fall is the better time.

I not only top-dress meadows but pastures—the newly seeded as well as the old. I never plant corn on old land (i. e.) land that has borne a crop of grain or roots the year before.

I take a piece of sod, plow it up and down the hill, with the furrows as straight as possible. Commencing on one side, I measure fifteen or thirty feet from the fence at each end, and in the middle if necessary, stick up my stakes, start my team and turn my first furrow while going up hill, for then the next furrow will lie better upon it than if plowed the reverse, and continue back furrowing until I have plowed out to the fence. Now I measure off the same distance again at each end, and proceed as before, and continue doing the same until I have finished plowing. I never plow head lands unless I am obliged to, or make short furrows in finishing up the lands. When done plowing, I take a roller and go lengthwise of the furrows, which leaves the ground right for the marker. If the land is rather smooth and free from cradle-knolls, I make marks for four rows at one time, but if rough, only three. I mark only one way, and that is *across* the furrows, and plant *between* every third and fourth furrows, *never putting a hill on top and in the middle of the inverted sod, but between them.*

When I commence to hoe I take a corn cultivator and go lengthwise of the furrows the first time, then across them—hoe twice, and I have never failed of getting less than one hundred bushels of ears per acre.

I have tried harrowing the land before marking, many times, but I am satisfied I can raise better and sounder corn—more of it, and get it ripe at least ten days sooner on land not harrowed before planting.

I always plant the eight-rowed yellow variety—save my seed before or at the time of husking—hang it up high and dry, and shell off a little from both ends of the ear and give to the hens or pigs. BYRON. *Springwater, N. Y.*

MESSRS. EDITORS—My wife being much interested in the department of Domestic Economy in the COUNTRY GENTLEMAN, and having acquired much information from it, proposes to offer some receipts for that department, for the benefit of others.

Poor Man's Cake.

Take of raised wheat bread dough 2¼ teacups—1½ cups of sugar—a piece of butter the size of a hen's egg. Spice and fruit to suit your taste. (The cake can be made either with or without fruit.) After it is mixed, set it by to rise, and then put it in pans and bake in an oven not quite as hot as for bread.

Soft Gingerbread.

One teacup of molasses, one cup of cream, two eggs, one teaspoonful of ginger, one small teaspoonful of saleratus, and a little salt, with flour enough to make it as stiff as pound cake. C. T. ALVORD. *Wilmington, Vt.*

[For the Cultivator and Country Gentleman.]

What Can be Done by a Man Without Means in Two Years.

A few days ago, when returning home from a neighboring village, I found that the waters of an intervening creek had become so swollen during my absence, from the rain and melting snow, that on attempting to ford it on horseback both myself and horse came near drowning, being carried away by masses of descending ice, and lodged against a neighboring fence. After establishing ourselves again on terra firma, and in the same place from whence we started, I was glad, dripping with wet, to accept the hospitalities of a house near by until morning.

During a conversation with the occupant in the evening, I learned some interesting facts concerning his history and farm management, which I record for the benefit of such of your readers as may happen to be poor, and as an inducement for them to "go and do likewise."

Said he: "I came upon this farm (50 acres) two years ago next May, and at that time all the property I had in the world was one horse—not a plow, drag, wagon, sleigh, harness, or anything else except my one horse. Indeed, had the man of whom I rented the farm known my condition he would have passed me by for a better tenant.

I went to a man who was extensively engaged in the lumber business, told him my story, and asked him to sell me a horse on time. He sold me the horse, and I gave him security on the horse for his pay.

I went to a harnessmaker for a set of harness on time, offering to give security on the horse I formerly owned, and on the harness itself, but he not liking to sell a harness on these terms, I again applied to the man who had sold me the horse, offering him the same security, which he accepted, and got me the harness.

I also told him that I must have some seed barley. He let me have forty bushels, agreeing to take security upon my share of the barley (one-half,) upon the ground. He would not accept the security, however, after the barley was sown; but in the fall, upon settlement, charged me five shillings per bushel and interest for the seed barley, and took barley of me at eighty cents per bushel for pay. From the seed sown I harvested over five hundred bushels of barley, which I sold at eighty cents per bushel; and this, with other grain which I managed to procure and sow, left me at the end of the year very well satisfied with the fruits of my labor.

In the fall I attended an auction sale and bid off forty very fine ewes. The man supposing I was another individual of the same name, did not ask me for an endorser, so I gave him my note at one year. In a few days, however, he ascertained the mistake, and came to see me. I satisfied him by giving security on the sheep, and stipulating that the proceeds of the wool and lambs should be applied on the debt. Giving the sheep good care through the winter, I paid the debt with the wool and lambs, and had ten ewe lambs left beside; so that I have now a choice flock of fifty sheep, worth at least $200. During the last summer I kept my sheep on four acres of clover grass, and fed them clover hay, well cured, beside, through the entire summer, and I never saw sheep do better.

Last fall I fattened thirteen hogs; the lightest weighed 250 pounds, and the heaviest 350.

Now, I have been figuring up how much I have cleared in less than two years; after deducting expenses and paying one half of the products for rent, and placing the personal property at a low estimate, I find I have cleared full $1,200.

A few weeks ago I took a trip to the West, and purchased a farm of 160 acres a short distance from the village of St. Johns, Mich., making payment quite a number of years in advance. Before leaving for home, I was offered $800 for my bargain, but refused. In the spring I shall sell out my grain on the ground, take my sheep, team, wagon, and other movables, and depart for my new home.

I must confess I was deeply interested in this statement, every word of which I knew was true. In the morning he took me to see his stock, and a finer, more thrifty flock of sheep I have seldom seen, while the remainder of his stock exhibited the same evidence of their owner's care. K. *Wilson, N. Y.*, 1861.

[For the Country Gentleman and Cultivator.]

Right or Left-hand Plows---A Plow Shoe.

As it is now time to begin to plow for corn, let me make a suggestion. Many of our best farmers advocate "left-hand plows, and tell every one they meet that *they* are the only plow that a man can do the *right kind of work with.* Why? They tell you that as you have your near horse in the furrow, you have so much better control of the team that you can do better work. Now the way I look at it, there is no difference in the right or left-hand plows, if they are of the same quality. Throughout the west the farmers use a single line and jockey stick, putting the line on the horse. Now having the line on the near horse, to have him in the furrow, of course we must have a left-hand plow. But if you have none, try your line on your off horse, using your jockey stick to jockey your near horse off to the place you want him, and I think in two hours time you will say, that there is no advantage in a left-hand plow.

Do not run plows about from field to field, without a shoe; you soon wear the bar of your share out on stones and hard roads. I give you a rough sketch of mine. I got a crooked stick, dressed it up as smooth as I could, put in a standard that passes up through the plow behind the mold-board, and made a notch in front that would just receive the point of the plow; in this way I can move my plows over any kind of roads without their coming in contact with stone, or anything of the kind. J. H. Hunt.

PERENNIAL TREE CABBAGE.

We republish the following paragraph, copied from a California paper some months since, for the purpose of attaching to it the annexed letter, just received from Dr. Hepburn:

Vegetable Curiosity.—There is now growing in Dr. Hepburn's garden, Mokelumne Hill, California, a cabbage tree which, for five years, from an ordinary cabbage plant, has grown to be some nine feet high in the main stock, and when its full branches were on, a month ago, near fifteen feet high. The stalk has become hard as wood, and it bore this year about fifty or sixty heads of cabbage. The Doctor intends to keep it growing, and thinks that in a few years more he will be able to boast the possession of the most profitable tree in the country; for besides great quantities of green cabbage and krout that it produces, he gathers many papers of seed, and hundreds of plants that spring up spontaneously beneath its boughs.—*St. Andreas Independent.*

Mokelumne Hill, Calaveras Co., Cal., March 27, 1861.

Eds. Co. Gent.—In one of the nos. of the Co. Gent. I saw a notice of my cabbage tree. I enclose you some of the seed which grew on it last summer. This is the sixth crop of seed it has borne. It is now beginning to blossom again. It also bears every year a great many heads, say 40 or 50; but on account of the weight, they are taken off when small, else the branches would break and split from the main stalk. It is an evergreen, and appears to grow the whole year. What the seed may do in your climate I do not know; but here we raise cabbages from it every year. James Hepburn.

This plant will not, of course, endure the severity of our winters. We will, however, have it tested both in the green-house and in the open air.

Good Yield of Clover Seed.—An Ohio paper says that "Mr. Weldy of Atwater, cut this last harvest three tons of clover from three-fourths of an acre of ground, from which he has just threshed five bushels of splendid clover seed." We should like to know whether this was the second growth or cutting or the first. In any case it is a large yield.

IMPROVEMENT OF PASTURES.

In the "grain and stock" farming of the larger portion of the northern and middle States, a difficulty is occasionally experienced from the prevalence of seasons unfavorable to grass—this product being insufficient for the summer supply of stock—and causing, if nothing more serious, a falling off in the growth or produce of the flocks and herds of the farmer. The same causes also lessen the supply of winter forage, and this, with the reduced condition of the animals, entails further decrease in value. A partial remedy is found in the usual practice of reducing the number of animals, but it is not a profitable time to sell when every one is forcing an over supply of an inferior article upon a dull market. And it may be that another season will prove for favorable pasturage, which will then be lost for want of stock to consume it. It may bring high prices for that then in short supply—beef, mutton, wool, dairy products, &c.,—but very little to the advantage of the farmer.

These thoughts, or something like them, will occasionally force themselves upon those engaged in grain and stock-growing, and it is our present purpose to offer a few hints on the improvement of pastures—of the means best calculated to render them productive and reliable, whatever the season may be, unless very much out of the usual course of nature.

The best security against the effects of drouth is found in a deep and porous soil—one able to hold a large quantity of "water of absorbtion," and furnishing ready passage for the "water of drainage," so that it will retain its moist and mellow state much longer than a hard or undrained soil. The effect of drouth is first apparent on the hardest and least fertile soils, and such suffer most from redundant moisture, because it must pass off very slowly by evaporation, which has a further tendency to bake and harden the soil. The first provision should be better drainage; next, if cultivated at all, deeper cultivation, and last, every available appliance in the way of enriching the soil. On a fertile soil grass starts early, its roots are stronger and run deeper and hence are less affected by dry weather than that of a weaker and later growth. Over cropped pastures are also slower in starting and have less power to withstand the lack of rain, and hence are less reliable at all seasons.

The most marked improvement in the product of grass we have ever observed, has been effected by manure applied in autumn, and this, in connection with irrigation in spring and early summer, has worked wonders on pasture lands where both may be applied. Under the head of manure we may class not only the contents of the barn-yard, but lime, plaster, bone-dust, ashes, guano, etc.; these latter, not, however, like the first, of universal application, but suited to the wants of particular soils. Upon clover, plaster or gypsum produces an excellent effect, and on soils suited to this crop, and not too far impoverished, it is a cheap and efficient means of improvement.

A better growth of grass will enable the farmer to keep more stock, and thus produce more manure, but only to a certain point are stock profitable. Too great a number will "eat the grass before it grows," or so early and so close as to prevent its growth, and thus spoil more than they enrich. It may be set down as a rule that a grain farm should winter more stock than it summers—making up the lack of forage by feeding freely of grain, and it will be found that such farms improve far more rapidly. The reason is very simple. Grain-fed stock produce more and better manure, its value is at least double that made from corn fodder alone, and will produce a quicker and more telling effect wherever it may be applied.

Let the experiment then be tried by all—on a small scale, if no more, by the incredulous—that all may be satisfied of the result. Manure should be composted for surface application, to give fineness, to destroy the seeds which it contains, and to render it readily soluble, that it may take immediate effect. Top-dress a meadow or pasture early in autumn, spreading the manure as even as possible. Top-dress the winter wheat which is to be seeded to grass now and clover in the spring, not only for the benefit of the wheat, but for that of the ensuing crop. If grass seed has been sown with spring grain, this too will be materially benefited by an early dressing of manure—will better withstand the winter, and produce a far heavier first crop.

We venture to predict that the farmer who thoroughly tries these experiments, will soon apply a larger share of his manure in this way. He will not feel the lack of manure to plow under for his corn crop when a thick, heavy sward supplies its place, nor observe any failure in the ensuing spring crop when that sward again comes to the surface; and his surface manured wheat will prepare the soil for more clover, to be again manured, if necessary, to further enrich the soil. Plaster will, of course, be employed, and in a few years he will very likely find that a dressing of lime will largely increase the product of his soil, and it will be accordingly applied.

If these views are correct, then the improvement of grass land lies at the foundation of better farming and more certain results in all its operations. The details in every case can scarcely be pointed out, but with the general principle in view to employ every available method to grow good grass crops, and keep better stock, the farmer can pursue his own methods, assured that experience and observation will bring wisdom here as elsewhere.

[For the Country Gentleman and Cultivator.]

FATTENING SPRING PIGS.

Eds. Co. Gent.—It has long been my practice to fatten spring pigs to furnish pork for family use, and I have generally been quite successful in so doing. As a sample I send you the experience of last year.

June 5th, I bought two pigs—Leicester and Suffolk cross—weighing 18 lbs. each. I put them in a tight pen and kept them there until butchered, on the 4th of Dec. They had the dairy swill of one cow, with the addition of a little corn meal and wheat bran; and after potatoes were fit to dig, the small ones from my little patch, boiled and mashed with their swill. Toward the last I bought a few bushels of ears of corn, which was boiled on the cob, and fed in addition to the milk, meal and bran mentioned above, which, I may observe, was so thin that the pigs could drink the most of it. The amount in dollars and cents stands as follows:

Fat Spring Pigs. Dr.

To cost of pigs	$2.38
Meal and bran	7.80
Small potatoes	50
Corn in the ear	2.25
Total expense	$12.93

Pork. Cr.

By 412 pounds of pork at $6.50 per cwt	$26.78
Deduct expenses	12.93
Profit	$13.85

In the above the lard from the intestines is not included, nor the soap-making material. It will be seen that the pigs gained a fraction over one pound each per day, during the six months I fed them. J. Sibley.

[For the Country Gentleman and Cultivator.]

CHESTER COUNTY PIGS.

An Illinois subscriber in the last number of COUNTRY GENTLEMAN, makes inquiry of those acquainted with Chester county breed of pigs, what would be thought of a cross between a full blood Suffolk boar, and "the largest sows of the neighborhood," and whether this would not make "good Chesters?"

Whether such a cross would result in good animals at all, depends very much on the character of these "largest sows." One thing is very certain, they would *not* make "good Chesters."

The Chester county breed of hogs may now be fairly considered *a distinct breed*, having certain well defined peculiarities of form, color, hair, habit and constitution, which in selections among the best families, are pretty sure to be continued down in their offspring. This is evidence always of a distinct breed. With mongrels or crosses, where peculiarities have not been *long established*, and may be considered *accidental*, the progeny is uncertain in character. Some years ago I purchased a farm near West Chester, Chester county, formerly owned by Capt. James Jeffries, who erected the buildings and resided on it for a time. In one of his voyages between Liverpool and Philadelphia, he brought home a pair of Bedfordshire hogs, which are generally considered to be the origin of what is now called the Chester county breed. By careful and judicious crossing, with our best native stock of the county, *continued* for a period of now 25 or 30 years, their peculiar excellencies and differences from all other breeds may be said to be fully *confirmed and established*. These are—pure white color, thin skin, *length and depth* of carcass, small head and other offal parts, width and depth over the shoulders, disposition to fatten at any age, and to attain *great size*. For food consumed, they are believed to return weight equal to any other breed. They are also well larded inside, making them emphatically the farmer's hog, and are also kind and docile in temper, making excellent nurses.

Several were killed last fall weighing 700 to 800 lbs., and they have reached over 900 lbs., making a pound of meat per day till they were killed. I have sent them to nearly every State in the Union, and in no case yet have had the least complaint of want of entire satisfaction.

Great care is, however, required in the selections, and I have had to advise some of my correspondents, that pigs from Chester county are by no means always "Chester county pigs," there being probably as many mongrels or mixtures in Chester county as elsewhere.

This *fondness for crossing*, recommended by "Experience" on page 204, in present volume, is a *strange* and most *injurious* habit with many of our farmers. Injudicious crossing has seriously injured the general character of American stock of all kinds. Instead of being satisfied with what has been accomplished already in distinct breeds, the wish seems to be to have something *better*. In England this curious propensity is almost unknown or confined to a very few, who by the aid of *abundant capital, quick perception of good points, combined with extraordinary skill and judgment*, in a long course of years have succeeded, either in originating a distinct breed of animals or *adding* to and *confirming* new points in an old and well known breed. Colling accomplished the first with the Durhams; Bakewell, Ellman, and now Webb, have done the same with sheep.

In this country the first thought with a farmer on obtaining a fine animal is, what a fine opportunity to make a cross, which too often he injudiciously attempts, and loses by the operation the benefit of 25 years of skillful effort. In England breeds are kept *pure*, and selected with reference to the requirements of the farmer, his soil, climate and business. It should be the case here.

In a breed of swine so nearly right as the Chesters, it is easy to see how much might be lost by crossing, but difficult to understand what is to be gained. Durhams, Devons, Alderneys, Herefords, among cattle, South-Downs, Bakewells, Broad Tails, and others among sheep; Essex, Berkshire, Suffolks, Chesters among swine, have all their fixed points of character. It is utterly impossible to combine all these in *one animal*. The superiority of any one breed consists in having *more* of the desired points than another. To have them *all*, would seem to come up to the standard of the Yankee clock, which was recommended, not only to give any hour of the *day* or *night*, to show on the dial the revolutions of all the planets, signs of the zodiac, predict changes of weather, &c., but would also on an emergency, give *six quarts of milk*.

Philadelphia. PASCHALL MORRIS.

[For the Country Gentleman and Cultivator.]

RUTA BAGA or SWEDISH TURNEP.

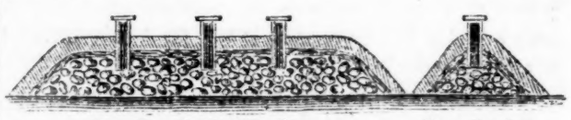
Practical Directions for the Cultivation, Storage, and Feeding-out of Ruta Bagas or Swedish Turnips.

BY JOHN RATCLIFFE CHAPMAN, C. E.

Difficile est proprie communia dicere.—HOR.

Turnips can be buried in pits or graves in the following manner, and they will come out in the spring as bright and handsome and sound as when they were dug up in the fall. Place the graves on the highest knolls, and avoid digging holes below the surface of the soil—form them in long piles, something in the shape of a common barn roof, by placing the turnips about three and a half feet high, and the sides at an angle of repose, formed by placing them truly, so that they will not roll down. A heap containing from 120 to 150 bushels, is about the proper size. As soon as the turnips have been placed in proper shape, cover them with straw, and the more straw the better. It ought to be drawn out as if going to be used for thatch, and then laid with the stalks of the straw pointing upwards. As soon as the straw is on, cover the grave with soil dug up all around it, and take care to tread the soil down tight and firm as fast as the work proceeds. This covering of earth ought to be from 10 to 12 inches in thickness in Central New-York. Before you finally close up the earth at the top of the heap, put in three ventilators at regular distances apart.

Ventilation is the key to the proper preservation of all roots buried up in graves during winter. I make these ventilators by taking four pieces of one inch bass-wood, two of them two inches wide, and two of them four inches wide; nail them up together so as to make a pipe with a bore of two inches square and about three feet long. Leave the ends of the two inch pieces half an inch lower than the four inch pieces at the top end, and then nail on *securely* a cap of *sound* board, six inches square. This will keep out all rain, &c., and yet allow the heat generated by the turnips when first buried to escape. Turnips are of a much warmer nature than potatoes or carrots, and require to be well ventilated, *or they will all rot*. Now it is evident that if the ventilators are left open during our Siberian winters, the turnips will be frozen, and subsequently rot. To guard against this, about the middle of December stop up the open sides of the ventilators at the top end, under the cap, with cotton batting pressed in tight.



PIT—Longitudinal Section. Cross Section.

Turnips treated as above directed, will come out clean and beautiful in the spring, and they will in a few years constitute an indispensable article of food for farm stock. Before they can be fed to sheep or cattle, they must be cleaned, either by scraping or washing, and then cut into thin pieces by means of a turnip slicer, which can be procured of any of our agricultural implement makers. The knives put in these machines for cross cutting soon rust out, and when that happens I cut the turnips twice, which

makes them fine enough. Where turnips are *very large and hard*, I think it best to cut them up with a sharp spade into four or six pieces before putting them into the slicer.

Turnips are most excellent feed for sheep, (store or fat,) young store cattle—for fattening cattle, or feed for cows, when their milk is not used for dairying purposes. Horses are very fond of them, and when fed sparingly are very useful.

I have found Skirving's Improved Purple Top Ruta Baga, for field culture, to be the best variety to stand the changeful seasons of this climate. The French White and Aberdeen Yellow *will rot badly* on a strong soil in a wet season, such as last summer and fall, while Skirving's will be sound, but not so large as in a favorable season, such as 1859.

There is no trouble in producing from 800 to 1000 bushels of turnips per acre, when managed in the manner above described, and at a cost of less than six cents per bushel. In fact they are much the cheapest stock food that can be raised on a farm, and if the climate would allow them to be fed off by sheep in the fields where grown, they would add a source of wealth to our farmers which is incalculable.

The opinion entertained by some, that the simple "grow turnips," "grow turnips," "grow turnips," (enunciated, if I remember right, by the great Daniel Webster,) will enrich the land on which they are grown, *is erroneous*. All green crops ought to be consumed by sheep on the spot where they are grown. The excrement and urine dropped and trodden into the soil, make it much richer than any other course that can be pursued with the same amount of green produce. In fact, the turnip crop is the foundation course to British agriculture, aided and stimulated, however, by a mild, moist climate, and a longer season for growth and ripening.

After casting about my thoughts for many years on the subject of a key course for American farming, I have come to the conclusion that the red clover is *the green crop*, and enough stock to convert *all the produce* of the farm into manure, with the exception of the bulk of the grain which must be sold, for farmers in New-York State cannot afford to convert the grain into beef, and hardly into mutton or pork, at such low prices as the markets have been ruling this winter.

There are some farms that would be enriched and their owners ultimately benefitted, (if they could afford to live through it,) *if all the products of the land* were fed to stock on the farm for the purpose of obtaining manure, even if the grain, when converted into meat, left a loss of 20 per cent. *It takes an age to enrich poor soils with poor manure.* A man dies or becomes discouraged before such lands *get a head of steam on.* It is certain that the remunerative grain growing power of a great deal of land in this State, is very nearly exhausted. The humus has gone to market, and there is nothing left but a lifeless mass of clay and sand, as sad as unleavened bread.

Oneida Lake, Madison Co., April 2d, 1861.

How to Prevent Sheep Shedding their Wool.

Messrs. Editors—I frequently see articles in agricultural papers in regard to sheep shedding their wool. My attention was again attracted to it by an inquiry published in the Co. Gent. of 4th inst., from "E. P.," Downington, Pa. He adds that he has understood oats would cause the loss of wool, but he had fed none, and hence that could not be the reason of his sheep losing their wool.

My impression is that it is for the *want* of oats rather than its *use*, that causes the difficulty, although I never fed much of it. Corn is our staple crop for feeding everything, and my remedy for all diseases of stock, such as "horn ail" in cattle, sheep losing their wool, &c., is corn. I rarely have any trouble with my stock in that way as long as the corn-crib holds out.

My sheep are Cotswolds, and they have never lost their wool, except two ewes one season that were sucking. By neglect they had got rather thin late in the fall, both being old, and came into winter quarters quite poor. It was then too late to remedy the difficulty. You must not suffer your sheep to get poor in the fall if you would have a good clip of wool and good lambs. In October, when the pasture begins to get poor, as it frequently does, I commence feeding very little corn, and continue it through the winter, and until the grass is ample for their support in the spring. During the winter, and especially the latter part, I add turnips to their feed, and just before weaning time I sprinkle upon the turnips about a gill of oil-meal to each ewe, which, of course, are now separated at this season of the year from the other sheep. The extra feed the sheep eat amounts to but a trifle; while the increase of wool and general thrift of the flock is very considerable, saying nothing about the additional number of fine healthy lambs.

"E. P." also inquires "what is the best feed to insure a great flow of milk?" This is answered, I trust, sufficiently above. More than half of my ewes always have twins, and *raise them too*, and the lambs get abundance to "eat, and grow fat." If the mother is fat, the lamb will not be poor. That is my experience, at least, among Cotswolds, and all breeders of that class of sheep, I am quite sure, will verify the same. I know but little practically, of other breeds, having always bred the long wools, as they are termed, but doubt not the rule will hold good in all cases.

I. D. G. Nelson.

Elm Park, near Fort Wayne, Ind.

POST AND RAIL FENCES.

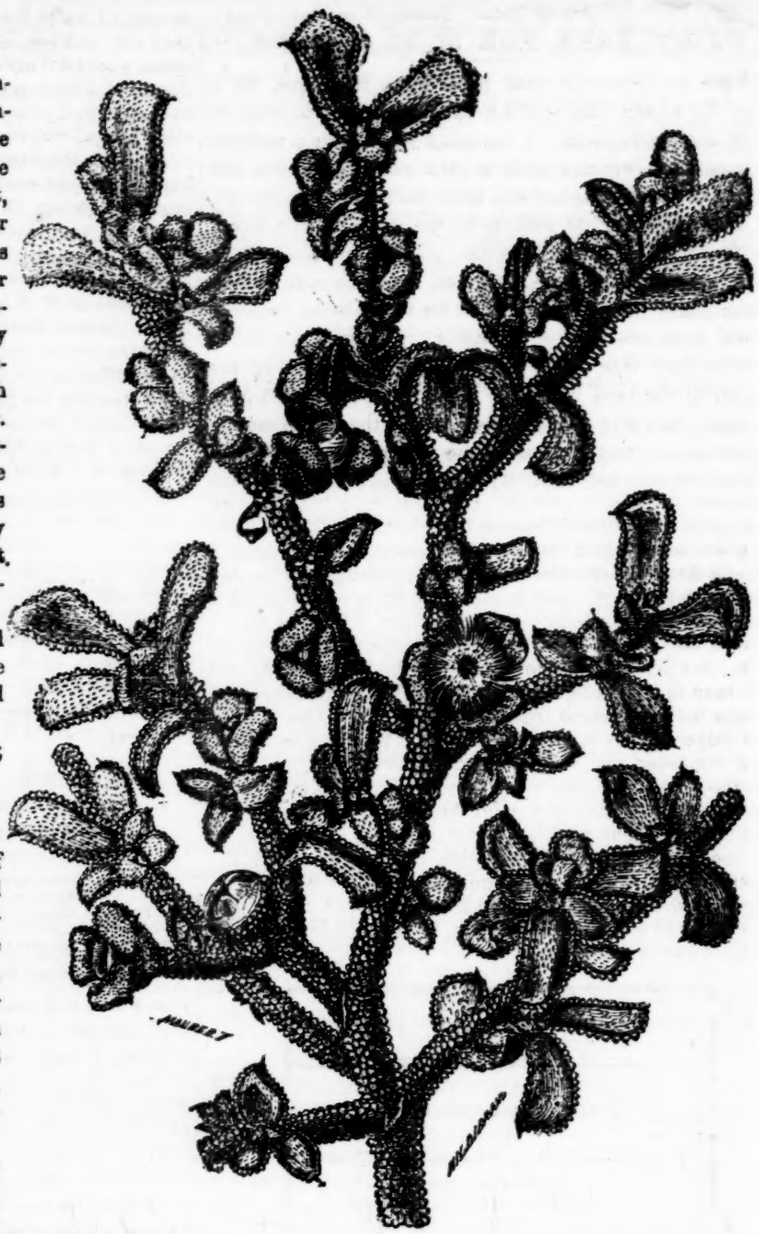
The increasing scarcity of fencing material has led to various economical devices and improvements on the old heavy zig-zag fences, and we notice a new one proposed by a correspondent of the *Homestead*. It is to attach the rails of our old worm fences to posts like boards, thus making a fence as durable as boards, and requiring only half the number of posts usually needed. The posts should be set firmly, at least two and a half feet deep, and butt end up, and with the widest side of the posts in the direction that the fence runs, as tending to prevent heaving, and to resist side pressure.

"A ridge of earth, a foot or eighteen inches high, running the whole length of the fence, and directly under it, will save one rail each length. This ridge may be easily made by first turning two furrows together with a plow, and then laying other furrow slices (grass side up) on top of the first two. The rails may be attached to the posts with spikes of proper size and length. Three rails over the ridge of earth, attached to the sides of the posts, and another spiked on to the tops of the posts, will usually make a fence sufficiently high and substantial. Where there is a scarcity of rails, a strand of fence-wire may be used in lieu of the top rail, or a long pole is perhaps better, of sufficient size to be split into halves and spiked on to the tops of the posts."

Time of Sowing Timothy.—A writer on this subject in the Ohio Farmer, would sow either very early in the spring, or as late as October in the fall, to escape the effect of dry weather occurring before the plants come up, or while they are very small. He gives an account of two pieces sown last year, one after wheat, the ground being plowed the middle of August, and harrowed and sowed to timothy seed the 1st of September, after a smart shower. The other was corn ground, harrowed between the shocks of corn the 1st of October and sown immediately. It came up, and could be seen forty rods distance before winter. The first sown showed no signs of growth, and was again harrowed and re-sown the middle of October, and has since done well. Land for spring sowing, he thinks should be fitted in the fall, then by sowing early, the frosts will bury the seed in the best manner.

THE ICE PLANT.

(MESEMBRYANTHEMUM CRYSTALLINUM.)



This plant, of which we give an engraving herewith, has herbaceous, cylindrical stems, attaining sometimes the length of a yard, and the size of the little finger, spreading or nearly recumbent, branchy, greenish, and sprinkled over with crystalline vesicles. These stems bear large leaves, especially the lower ones, oval, very wavy, alternate or opposite, of a glaucous green, often slightly purpled toward the tip, tender and succulent—their whole surface covered with vesicles like those of the stem, but smaller. The flowers are lateral, and almost sessile; the calyx has five divisions; the corolla of medium size, has numerous petals, very narrow, white, often slightly tinged with purple at the tip. The fruit is a rotund capsule, with five cells, enclosing numerous small rounded seeds.

This plant grows at the Cape of Good Hope and in the Canary Islands, whence it has been introduced into Greece, and the rest of southern Europe.

The Ice Plant is an annual or biennial; its flowers bloom in July and August.

The crystalline and brilliant vesicles with which all the plant is loaded, render it one of the most singular and curious of known vegetable productions; regarded as extravasations of sap under the epidermis, classed by Auguste St. Hilarie among the *papules* or superficial glands, they are often very large and protuberant, especially in hot weather, and then resemble particles of ice, or brilliant crystals. This characteristic is also found, but in a less degree, in some proximate species.

The Ice plant is propagated from the seed, sown in the bed or under sash in April or May, in pans of mould—the plants put out while small in a warm exposure in the open air. In the south, where it naturally reproduces itself, it is better to sow the plant where it is intended to grow, covering the seed very lightly. It is also propagated from cuttings of the branches, which should be allowed to wilt somewhat in the air before they are planted.

This plant fears excessive moisture, which, particularly in winter, soon destroys it. In the climate of Paris it must be protected from the cold during this season, in a house of moderate warmth, where it can only be kept in pots well drained, filled with fresh earth, rather poor than rich, and mixed with a little compost.

The Ice plant is sometimes employed in medicine as a diuretic. In Egypt soda is extracted from it, and it has even been advised to sow it for this purpose in the sandy districts of France, which, however, possesses indigenous plants much better adapted for that object. The French, who like to avail themselves of everything that can decorate the table, also employ it to garnish certain dishes, and the drooping branches can be made to ornament a basket or dish of fruit very beautifully.—*Translated and condensed for the* COUNTRY GENTLEMAN *from the Revue Horticole.*

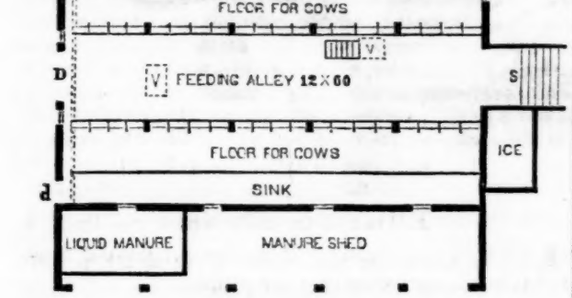
DEATH OF M. T. GOLDSBOROUGH.—The American Farmer announces the sudden death of this estimable gentleman, of congestion of the brain, at his residence near Easton, Md., on the 10th of March. "Mr. Goldsborough was well known within and beyond the limits of the State, as one of our most intelligent, and at the same time practical and successful farmers. As President of the Talbot County Agricultural Society and Vice-President of the State Society, he has been for many years prominently connected with the various measures pertaining to the improvement of our agriculture."

DESTROYING PURSLANE.—The Prairie Farmer, after stating that purslane "will not grow after having been digested by a hog," says that Prof. Turner has a sort of toothed scoop with plow handles attached, with which he passes between his nursery rows and takes out the purslane which the hoe and cultivator has left there, and carries it off easily and rapidly, for the food of swine. The teeth of this instrument are made of iron rods about three-fourths of an inch in diameter, and half a dozen in number.

[For the Country Gentleman and Cultivator.]

DAIRY BARN FOR 30 TO 40 COWS.

I saw an inquiry in your paper some time ago, for a plan for a barn that would hold stuff enough to keep 30 cows and stable them. I thought I would give a description of mine, which I think is quite convenient, and will stable 40 if needed, and will hold fodder enough for 30. It is 60 feet long, 34 wide over the stable, with a leanto on the north side 12 feet wide, making the floor 46 ft. long and 12 wide; bays 24 by 46, on each side of the floor. The leanto forms a shed for the manure, which I wheel from one side of the stable. I have but 4 bents, one on each side of the floor, and at the ends. In the center of the bays under the plate, is a post with 3 girts running each way to the bents; next to the leanto merely a post under the plate, and in the perline plates is a tie in the center over each bay. My posts are 16 feet, but if I was to build over again, I would have them 18 or 20; it would make but very little difference in the cost, and if the room was wanted it would be very convenient; and I think I should do away with the big beams, by letting my perline posts run to the sill, and frame from them to the outside posts. I have a window over the doors of 24 lights; I have a door 8 feet wide, and a 12 lighted window on each side, and a 9 light window in the peak of each end, and my barn is always light all through. The ventilators and shoots for hay, extend from the stables in the basement to the ridge, and are made with four poles hewn on two sides, and furnished with ladder-rounds on two sides, and slats on the other two. Every other slat can be taken out, so as to pitch hay from any point high or low, directly into the stable. They ventilate the stables, and in cold weather need closing to keep the stables warm, regulating the opening according to the temperature. The poles forming this shoot are fastened to the rafters and to the perline tie. It is smaller at the top, so that the hay will not lodge on its way down.



BASEMENT AND STABLES.

S. Stairs toward house, under granary.
D. Door, 8 feet wide, with 12 lighted window on each side.
d. d. Doors for cows to enter.
W. Wall to hold the bank.
v. v. Plan of ventilators above.
w. Window.

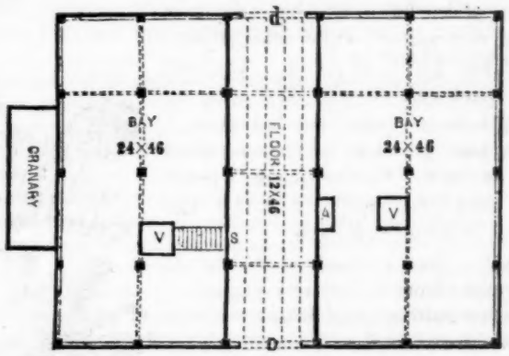
The floor on which the cows stand is raised 4 inches higher than the sink behind them, and is made by laying two tier of stone in water lime and filling up even with the top. The floor they stand on slants 2 inches from the stanchions, which are 5½ feet from the sink behind. The floor of the south stables falls one foot from west to east, giving drainage. The double dotted lines are the drain, falling six inches from the south stables to the tank. The north stables fall 18 inches from west to east.

The liquid manure tank, 12 by 18 feet, is covered with plank on sleepers.

The manure is thrown out of the north stables through the windows, and wheeled out from the south ones.

My stables are 34 feet from outside to outside of walls, 60 feet long; wall on one end, the other end is mostly taken up with doors and windows. I have a door at each corner to let my cows in; a door in the center 8 feet wide, so that I can run a wagon in if I choose, which I find convenient sometimes.

On each side of said door is a window, 12 lights, with a 12 lighted one in the west end; and four 10 lighted on the north side, makes the stable always light. My floor is a cement of water lime and gravel all through; it has been used two winters, and seems to stand well. I am frequently asked if my cows do not get sore standing on such a floor, but I have not discovered any inconvenience whatever and find many things very convenient; my stable is always free from any bad odor, and if any grain is on straw or in chaff, the cows can always get it; this floor is easily kept clean, and every thing saved. The posts under the cross sills being 12 feet apart, gives room for four cows between them, three feet from center to center being enough for large cows, and less will do for small ones. I am aware that some think that cattle will not do as well in stanchions as if tied in a stall, but I cannot agree with them. I have been among cows a great deal, and as far as I have noticed they have done as well when in stanchions as in any other way. As for convenience, they are much the best; you let your cattle all in at one door for one stable, and with a little pains you can learn them to go to the same place every time; they are all together to feed, milk or to look after. They keep one another warm, and



PLAN OF PRINCIPAL FLOOR.

The dotted lines represent the timbers.
V. V. Ventilators, and shoots for throwing down hay.
S. Stairs to basement.
A. Side door, to pitch from floor to basement.
D. Front door; over it a window of 24 lights, two lights high.
d. Back door, with similar window.

The small squares show where the posts stand, both below and above the principal floor; those on the walls standing above, and those within, in the stables below, forming the line of the stanchions.

seem to enjoy it, and if the stable is tight in cold weather, you can keep it warm, and in warm weather open the ventilator. I find that cattle eat less and do a great deal better in a warm stable in cold weather. I only want them out long enough to drink, and not go far for that.

Richfield, Otsego Co., N. Y. A YOUNG FARMER.

This is a very convenient and well arranged barn for cattle, but we would suggest an improvement in the stables by making feeding alleys where the "sinks" now are, placing the cows' heads next these alleys, and making the hay shoots next to the side walls. This will cause all the manure, litter, &c., to be thrown into the central alley, and by providing a door at each end of this alley, a cart may pass through daily or weekly and cart off the manure to the fields or to the compost heap. Thirty cows will furnish a good load or more of manure daily, and wheeling and shovelling it daily amounts to considerable labor in a year. The ventilators on each side follow up the roof next to the shingles, and open at the peak.

The bays are rather too wide for convenient filling, without considerable labor in horizontal pitching, which cannot be well avoided in a barn of this length. If shorter, the bays would be narrower; if 80 feet long, two parallel floors 12 feet wide might extend across the barn, leaving a bay 16 feet wide at each end, and one 24 feet wide in the middle, and filled from both sides. This would require very little horizontal pitching. EDS.

A FINE COLT.—I have a colt which stood, at nine months old, 14⅛ hands high, and measured around the arm 19 inches. He is in excellent proportions throughout. Sired by Bay State—grand sire, Green Mountain of Vt. Dam bred in Kentucky. C. G. TAYLOR. *Rock Island Co., Ill.*

[For the Country Gentleman and Cultivator.]

ON RAISING POTATOES.

As the time for planting is near at hand, I think it would be well to say something through your most excellent paper in regard to raising that almost indispensable article of farm produce, called potatoes. If a family are without potatoes, they hardly know how to get a meal of victuals. They might almost as well be without bread. Now it seems to be the general opinion among the people of our country, that any one and every one can raise potatoes, planted on any soil or any time between the 1st of May and the 1st of July, and harvest or gather them any time between the 1st of October and the 1st of December. Now those very men who plant their potatoes in June and dig them in November, are the first to complain of that dreadful disease the potato rot. They tell you their potatoes are rotting badly, and they don't know why they should—they always leave them in the ground until cold weather, to prevent their rotting—they fear they will lose their entire crop, &c.

I admit that any one can raise potatoes if he knows how; but when I see a potato patch here and there, remaining in the cold, wet and partially frozen ground, through all our heavy fall rains, perhaps till the 15th or 20th of November, then I am of the opinion that there might be good farmers who don't know how to raise potatoes. Again many kinds of potatoes, if planted very late, will not get ripe before frost comes and kills the vines, which I assign as a good reason for their rotting. It is my opinion from the best of my knowledge and experience in raising potatoes, that full three-fourths of all the losses in our country on the potato crop, are more owing to bad management than any other cause. I have known farmers, or men who call themselves so, sort out their smallest potatoes, perhaps two or three kinds together, from the size of a walnut to that of a butternut, and strew them along in the furrow about one foot apart, without cutting; and I have never known them to fail of raising a very small crop of very small potatoes. One of these small potato-growers a few years since, took a farm to work on shares for three or four years—one of the best farms in Jefferson county—he raised a few very small potatoes, scarcely enough for the family's use, and of very poor quality at that. He finally came to the conclusion before he left, that the farm would not produce good potatoes.

Previous to this time, the owner of this same farm had lived on it some thirty years or more, and never failed of raising a good crop of potatoes. I have raised potatoes every year for the last twenty-eight years, and have never failed of raising a fair crop, and seldom lose any by rotting. I will now give my plan for raising potatoes.

I take, for instance, a piece of stubble ground that was manured last year and plowed last fall, and as soon as the ground is dry enough in the spring I plow again, and if the land is wet I ridge in lands about twelve feet wide, always plowing the same way, so that the water will run off in the dead furrows. I then harrow well lengthwise of the furrows—then with a light plow, furrow the ground three feet apart—then take good large potatoes and cut them so as to leave one eye in every piece—then drop two pieces in a hill two feet apart in the furrow—then cover with a hoe.

For the last six years I have raised a white seedling, a very excellent potato and a good yielder. The tops of this kind are very small—therefore will do to plant nearer than many other kinds. Potatoes should never be planted two years in succession on the same ground. I would recommend changing seed as often as once in two or three years. I would also recommend planting each kind of potato separate—never plant different kinds together.

Watertown, N. Y. D. P.

☞ R. N. Brown, Esq., Superintendent of the "Buffalo and Erie Railroad," will accept our thanks for timeable of trains for the season opening April 15.

[For the Country Gentleman and Cultivator.]

JOHNSTON'S IMPROVED CULTIVATOR.

Messrs. Editors—As the time for cultivating corn is near at hand, I want your readers to bear in mind that I think I got a great improvement made in cultivator teeth last year, by Messrs. Remington, Markham & Co. of Ilion, N. Y. They do the best work in cultivating corn and potatoes, on all stiff soils, I have ever seen; in fact they are invaluable, and I would advise farmers to try them; and if they are not fully satisfied with them let me know, and I will never recommend another implement. I am not puffing on account of being paid for it. I never took a cent for that. Messrs. Remington & Co. sent me the bill when they sent the cultivator, and I sent the pay the day it came to Geneva. Shares' Horse Hoe is a good implement to work corn or potatoes on loose soil, but nothing like so good on stiff soils as the cultivator. Their steel plows are also excellent, so far as I have seen. They are a great firm to work in steel. I would advise all those having stiff soils to get their cultivator.

Near Geneva. JOHN JOHNSTON.

[For the Country Gentleman and Cultivator.]

NORTHERN AND SOUTHERN CLOVER.

Messrs. Editors—I notice your quotation from the Boston Cultivator, on Clover, which says "the northern is much the largest growth, the stalks being sometimes 3 or 4 feet long and as coarse as pea vines—the southern grows scarcely half the height, and matures much earlier, makes more blossoms than the northern, and the second growth of the same season is usually more abundant than the northern, often nearly equalling the first, and being *generally preferred for seed.*" Now I never saw a second growth of the large clover. The large clover if cut for hay once, cannot be cut again that season—the seed has to be taken from the first and only crop of the season; and the small or southern clover won't produce seed the first crop in the season, unless pastured off until about 15th June, and then it will generally give a better crop of seed than when cut about the last of June. I have wondered why the seed of what the Boston Cultivator calls northern, should bring most money in market, as I never could see the use of raising it, unless it was for the seed. As hay I think it worthless, but it must answer somewhere, else the seed would not sell highest. John Johnston.

[For the Country Gentleman and Cultivator.]

BURYING STONE.

Eds. Co. Gent.—In your paper of March 21, p. 187, you copy from the New-England Farmer, an article upon clearing fields of stone by burying them. I have had a little experience in this matter, and think it the easiest and cheapest way of disposing of them.

Upon about two acres of my farm there was quite a number of large stone, partly above ground, that were very uncomfortable to work around with the plow and drag, and I disposed of them as described in the article referred to. They are now sleeping quietly beneath the sod, and out of the reach of the plow. I buried some that could not have been taken from the field with three yoke of oxen. But one thing is very important in doing this work, and that is, be sure and dig the holes *large* and *deep* enough—especially for large stone—before tumbling them in, so that if they fall either side, or end up, they shall be out of the reach of the plow, for it is very difficult to move them when in the hole. To bury very large stone, the hole should be dug partly under them, as it is much easier getting them into the hole—and they should be at least a foot below the surface when buried.

Jefferson Co., N. Y. J. L. R.

[For the Country Gentleman and Cultivator.]

Feeding Stock---Inquiries Answered.

WATERTOWN, N. Y., March 30th, 1861.

S. EDWARDS TODD—I have been very profitably interested in your articles on feeding stock, and I hope you will continue them. We want volumes of just such articles—something that is practicable for common farmers.

Will you allow a stranger to ask you a few questions; not, however, as a catechist, but as an inquirer after truth, and it will be quite as satisfactory to me—and will benefit others probably, if you will answer in the Co. GENT.

1. I am in great doubt about there being so much profit in feeding stock, as yourself and John Johnston speak of. Now can you explain to me why I cannot make feeding stock "a paying business," as well as yourself and others?

2. Mr. John Johnston says: "A steer, with first rate pasture, should gain 400 pounds in a season of pasturing." Now, is that possible, and how does it accord with your experience?

3. I have a few steers, three years old this spring, which I have been feeding the winter past, and they are tolerable good beef, but not first rate. They will weigh from twelve to fourteen hundred pounds each, live weight, and I can sell them to butchers for $40 each. Now if you were in debt, as I am, would you sell them for $40 each, or would you keep them until another spring? These inquiries must suffice, although I would like to ask many others. E. D. P.

Answer.

1. To remove a man's doubts about feeding stock being a profitable business, would be almost like draining a wet field without a good outlet. Of course, I nor any other man can tell, when at a distance, why a man fails in his efforts to feed stock with profit, but could the system of farm management, and stable management, and cattle management be all spread out before us, it would be a very easy task to determine where the leakage is.

As to the *profit* of feeding stock, there is not a *shadow* of a doubt in my own mind. I *know* there is great profit in it, when every thing connected with the business is conducted systematically, and *with a proper reference to the improvement of the soil.* Feeding stock and raising grain, in order to be attended with the greatest profit, must go hand in hand. It will not answer to look simply to the value of the stock, which have consumed the products of the farm; we must have an eye on the increased amount of grain which the manure of the stock will produce, over and above the amount that would have been raised, had there been no manure applied to the soil.

For example, suppose we feed a lot of cattle one hundred dollars' worth of grain, and by very close figuring, we barely get market price for that grain, making no account of the labor required to take care of them. Where is the profit? Why, if all the manure is carefully saved and judiciously applied to the soil, and if the soil is drained as it should be, the manure will produce so much more grain, than would have grown *without* it, that any reasonable man will discover at a glance that *here*—in the greater crop of grain—he receives an ample remuneration for his services while feeding his stock, and also for the interest on the capital invested while he was preparing his stock for market.

If friend E. D. P. will investigate this subject, he will doubtless discover that his stock is not exactly of the best kind to take on flesh well, or that he has not kept them growing all the time from year to year, or that he has overstocked his pastures in the summer, or that he has not saved, and applied in the best manner all the manure to his fields, or that his soil has been too wet to allow the manure to benefit the crops as much as it would have done had it been thoroughly drained. Here is a long chain of very important contingencies, which have a very important influence in feeding stock with profit; and if only one link is wanting, there will be a bad leakage in the profits of the business.

2. Mr. John Johnston wants nothing at all to fully substantiate his assertion, with reference to the number of pounds which a steer should increase during one season. He spoke a great distance *within* bounds, and my experience fully endorses and *exceeds* this statement. I will pen a few facts with reference to the poorest calves I ever raised.

Four years ago this spring, as many farmers had recommended *feeding* calves, instead of allowing them to suck, I thought we would try our success in that mode of raising calves; and so we fed them milk as soon as it was drawn from the cow's udder, for several weeks, and then began to mingle skimmed milk with it, and also a little wheat flour. But they soon were attacked with the scours, and in the fall I was so mortified at their appearance, that I resolved never to try to raise another calf by hand.

During the succeeding winter they were fed cut cornstalks in the morning, cut feed, with a quart of meal each at noon, and hay at night. Two or three times a week they would get a few quarts each of roots. The next summer they increased about three hundred pounds each. The next winter they got cornstalks in the morning, and oat and barley straw during the day, with a peck of turnips each at noon, and hay at night. In the spring, when turnips failed, they received about a quart of corn and oat meal each, daily. When they were turned to grass, the meal was discontinued, and when those steers were 29 months old, they weighed from twelve hundred to twelve hundred and sixty pounds each. They were worth four cents per pound, live weight. Steers that I raise by allowing them to suck for three months, have always been heavier than these at that age.

3. I would not sell steers of that weight for that price, unless the sheriff were after me, and I could hire no money. Don't be afraid, if you are a few dollars in debt. Keep your steers improving. Have them weighed occasionally. Don't let them fall away next fall nor winter; and next spring, having given them four quarts of meal each, all winter, begin to increase their daily allowance until you feed them eight quarts each, daily, if they will eat it readily. Let them run to grass about two or three weeks and sell them *by weight.* Such steers will weigh like a chunk of lead. Farmers seldom get the fair value of their fattened steers, because they do not know the weight of them. They should know about how much an animal will weigh, and how much it is worth per pound, live weight, and then *ask it*, or they will never get it.

S. EDWARDS TODD.

[For the Country Gentleman and Cultivator.

STRAW BEE-HIVES.

MESSRS. EDITORS—Much has been said and written about straw hives being the best for bees, or straw being the best material for hives, and the chief difficulty, according to different writers, seems to be in making the straw hive in proper shape and form for the present mode of bee keeping. It appears to me that there is no difficulty in making a straw hive of any form. I am not largely in the "bee line," having only a few "for old acquaintance sake"—bee hunting having been a favorite pastime and pursuit in my youth, more than forty years ago.

I have always had a strong attachment to the old-fashioned straw hive, such as used to stand around the house and gardens in "ye olden time," and am aware that a change in shape and form of the old straw hive to the form required for present uses, would destroy much of the poetry and romance that hang around it; but the "aid and comfort" to the bee in a well made straw hive, of proper shape and form to receive the Langstroth frames and honey boxes on the top, will be about the same as in the old-fashioned conical and poetic hive. I have a plan on which I propose to make a straw hive adapted to present use. It is first to make a frame of the size and shape of the required hive, of willow or hickory rods—a skeleton frame—and on to this bind, braid, or twist the straw. In this manner a straw hive can be made, without any difficulty, of any size or shape. An upper one for the honey boxes can be made in the same way, with a flat straw roof, over which a thin water tight cover can be placed, with projecting edges. Hives can be made of this material cheaper than of boards, lighter to handle, and with movable comb frames can be kept perfectly clean. P. *Brooklyn, N. Y.*

[For the Country Gentleman and Cultivator.]

WHEAT ON SOD LAND.

Messrs. Eds.—Your correspondent, J. T. T., in the Co. Gent., of 14th March, tells of having harvested the past season, on seven and a half acres of land, a crop of winter wheat at an average yield of over thirty-three bushels per acre, weighing 63½ pounds per bushel, and further remarks:

"By the way, should not our farmers sow their wheat on sod ground and follow with corn, instead of planting corn on sod ground and following with wheat? I think they should, and believe substantial reasons can be given. What say the wheat growers? My success has been on sod ground?"

Some over a year ago I received a letter from Hon. Asa P. Cate of Northfield, N. H., giving the result of his views and experience in the culture of winter wheat in New-Hampshire, Mr. C., as far as my knowledge extends, being one of the first that attempted the growing of winter wheat in this section of the State. In the letter referred to, he says:

"I commenced the cultivation of winter wheat in the year 1850, and have continued it without interruption up to the present time. The first year I sowed one bushel of the white bald winter wheat, on the sixth day of September of that year, on land that had grown a crop of corn the same season, the crop having been cut up and removed. * * * I have no minute of the time when I harvested it, but I find by my record of crops, that it was threshed August 7th, 1851. It measured up of clean wheat, 24 bushels, weighing 65½ pounds per bushel. As I have already said, I have continued to raise winter wheat ever since, and am perfectly satisfied that it is safer by far, and surer than the spring sown, for most soils in our State. I have grown it on ground which had been hoed, and on the inverted sod, breaking up the same at or about the time of sowing the seed. Out of the time, I have sown four years on the recently broken up land, and I do not see but I have succeeded in one case as well as in the other. * * * There is one other point to which I wish to call your attention, which I liked to have omitted, and that is the time of sowing. I would always insist upon early sowing, say in this section, at least *on or before the 25th of August.* The reason why so many of our farmers fail in raising good crops of winter wheat, is, because they wait for other crops to ripen before they sow. The fact that we can raise good crops on newly broken up land, takes away the objection which many urge as a reason why they will not try to raise their own wheat. Let me suggest *that corn had better follow the wheat, than wheat the corn.* * * * All that is now wanted to secure the great object of raising our own flour, is a knowledge of the fact that winter wheat can be raised successfully on the hill-sides, and on the plains, and in the valleys of our State."

From the preceding it is seen that the two writers above quoted, entertain precisely the same views. And by repeated experiments I have made within the past nine years, I feel fully authorised to say their views are correct, and of practical application—perhaps, however, more so to such farmers as are anxious to raise wheat for family use, rather than large quantities for sale. In this, my object is to instruct in the matter of raising wheat, the common class of New-England farmers, rather than the great wheat growers of the west.

The land selected for the wheat crop on greensward, should be free from rocks, stumps, &c., so that the furrow slice can be completely inverted, and shut in so as to prevent the grass from springing up among the wheat. It may be that sward land—say a timothy and redtop sod, that has been mown for several years, is not as favorable for the production of a good crop of wheat, without manure, as a clover ley or sod. But the course I have time and again practiced, has been to plow the sod land the latter part of August, or early in September, next rolling the inverted sod for the purpose of closely shutting in the furrow slice, and making it better carting on the manure, applying 15 or 20 cartloads per acre of compost, made in the hovel, by daily mixing muck, loam, sawdust, &c., with the droppings of six or eight head of cattle kept in the barn at night. I use absorbents sufficient to absorb the liquid portions of the manure, and the whole of which is kept under cover till carted on to the field; it is spread and thoroughly mixed with the soil by the use of a "Bucklin Cultivator Harrow," a first rate implement for mixing the soil and manure, and furnishing a fine seed bed. The wheat is then sown and well harrowed; then sow timothy seed, and finish off with the roller. Some say the land should not be rolled after the wheat is sown, but that it is better to have ground rough, as left by the harrow. I have tried both ways, and find no advantage *in not using the roller*, but find the wheat comes up better and more even where the roller is used—besides I prefer to have the timothy seed rolled in, rather than having it harrowed in. In the spring, sow clover seed. I have always obtained fair crops of wheat upon the inverted sod, averaging better than on "old ground." I do not think the wheat is so liable to winter kill on sod as on old ground. The stubble and inverted furrow slices do not pack or close upon the subsoil, as does that after a hoed crop.

In August 1858, I had a number of varieties of winter wheat, originally received from the Patent Office; having increased the varieties somewhat, I plowed a piece of interval sod land, also a piece of gravelly irony sod land, another a deep loamy soil, and a fourth piece, a good yellow; but somewhat rocky upland. All were top-dressed with the compost manure above described. Wheat sown, some the last of August, and others first week in September. Timothy seed sown and rolled in, and the clover seed in the hull sown early in April. The result was, I obtained good crops of wheat from each piece of land, and the past season mowed heavy crops of hay on each piece. Now suppose the wheat had all winter killed, then the only loss in the case would have been the seed and the labor of sowing. But I am inclined to the belief that had the wheat been an entire failure, the grass crop would have more than compensated for the loss of the wheat. The timothy would have headed out in September, and so would a portion of the clover, making a capital winter forage for cows and young cattle. Taking the above view of the *chances* of raising winter wheat, and keeping up the hay crop on the farm, the *risk* of attempting to grow winter wheat in New England is not very great after all, providing the farmer complies with the necessary common sense conditions connected with successful culture of this cereal.

Mr. John Johnston, and we know of no better authority to, insists upon early sowing, and that the manure be applied to the surface, and harrowed in. My experience leads to the same conclusions. By early sowing the plants get a good start, well rooted, and thereby much better able to withstand the ill effects of the winter's cold, and the usual "freezings and thawings" of autumn and spring. By early sowing the chances are greatly in favor of the crop escaping injury from the midge and rust. If the manure is plowed in deep, as some recommend, the plants usually receive but little benefit from the manure in the fall, and consequently are not in a situation to "go ahead" in early spring. Liebig has something to this point in his late work on "Modern Agriculture." He says—"An accumulation of nourishment in the upper layer of a field enables plants, during the first period of their development, to send out ten-fold, perhaps a hundred-fold, more absorbing rootlets than they otherwise would have done, and their later growth will be in proportion to the greater number of rootlets thus gained, by which they are enabled to seek and appropriate the food distributed sparingly throughout the deeper layers."

The importance of obtaining a good start, both in the young plants of our grain and hoed crops, is attracting more attention than formerly. Hence we find so many statements in the agricultural journals of the benefit de-

rived from the application of various concentrated and artificially prepared manures. The start given to the young plants by superphosphate of lime, or other manures, enables it to send out a greatly increased quantity of "absorbing rootlets," which usually tends greatly to increase the crop, and hastens its maturity. This is a matter of much consequence some seasons, particularly with the wheat in escaping the midge, and so in the corn crop in case of early frosts, as was the case in many sections of the country in the seasons of 1859 and 1860. I saw last autumn good fields of corn that were ten days in advance on those portions of the field having been manured in the hill at planting time with a spoonful of superphosphate of lime, and ten days difference in the ripening of corn or wheat makes a grand difference in the value of the crops some years.

If the farmer does not wish to stock down his inverted sod with grass seeds, when sown to winter wheat, but wishes to follow with corn, it will be a good plan to sow in the spring upon the wheat, ten pounds of clover seed and a bushel of plaster per acre, for the purpose of plowing in with the stubble late in the fall; such a dressing is equal to a tolerable manuring. In the spring, cart on green manure and plow in, and corn may be planted with a fair prospect of obtaining a good crop. This course is what is meant by the corn following the wheat, rather than the wheat following the corn crop—oats or spring wheat to follow the corn crop the next season. This may be a good course enough where hay is not the leading object; but where it is, we think seeding with the wheat upon the inverted sod a better way. But farmers must exercise their own judgment in these matters, and govern themselves accordingly. L. B. *Warner, N. H.*

[For the Country Gentleman and Cultivator.]

SWEENEY IN HORSES.

Eds. Co. Gent.—Each of the articles in reference to sweeney in horses, which have appeared in the Co. Gent. recently, have occasioned me to feel like saying something on the subject. But I have deferred it, thinking perhaps some one else would relieve my mind. Either of the prescriptions given will promote a cure under favorable circumstances. The only trouble about it, is that some persons may be led to suppose that the particular articles named as ingredients of those prescriptions, are essential.

Sweeney is simply a wasting or shrinkage of the part, produced by anything at all that retards or decreases the circulation through that part, and so materially diminishes the natural healthy secretions. Lameness of the foot or leg, so that the horse favors the limb by not bearing his weight on it, and using it as little possible, if long continued, is very likely to induce sweeney of the shoulder or hip. A bruise, if not severe enough to produce rupture of the skin and suppuration, frequently causes sweeney. You may very readily sweeney a horse in either shoulder, by tying up the foot, a la mode Rarey, and so compelling him to throw all his weight upon and direct all his energy to the other limb for any considerable length of time.

A year ago I had a colt kicked, and its leg broken, at three days old. I swung the leg to a sling round its body. For the first week it lay almost constantly, except when helped up to suck. It then commenced to get up and move about considerably on the well leg, which grew extraordinarily fast, while the other actually seemed to diminish, and shrank or sweeneyed at the shoulder till there appeared to be nothing scarcely at all on the shoulder-blade. At the end of three weeks the bone was well knit, and I turned the leg loose; but it was now not more than two-thirds as large as the other, and quite three inches shorter. I watched the colt closely, but did not see it attempt to put it to the ground or use it, for more than a week, and had nearly despaired of its ever doing any good, when I one day saw it bend down on the well leg and touch the foot of the other to the ground, evidently trying whether it could bear any weight on it. From that time it used it more and more every day. The leg grew rapidly; and though I did nothing to the sweeneyed shoulder, it soon filled up again, and in a few months no one could tell from the external appearance which leg had been broken.

Remove the immediate cause of the shrinkage, and nature will mostly restore the muscle without further assistance. Her recuperative powers may, however, be aided, and a cure hastened by any stimulating application to the parts. Coal oil, British oil, or any thing of that kind, caused to penetrate by elbow-grease administered by way of friction, will hasten their restoration. Horses suffering with sweeney should always be allowed to rest as much as possible, both on the score of humanity, and because when in use the well limb is constantly making extraordinary exertion, and thus diverting to it the powers of nature which would otherwise be directed to the restoration of the other. Wm. H. Ladd.

Richmond, Jefferson Co., Ohio.

[For the Country Gentleman and Cultivator.]

HUNGARIAN GRASS.

The seed should be sowed in this latitude from May 20th to June 1st. I have usually sowed about the 25th of May, while others have waited five to ten days later. By sowing early, the crop matures so that the grass may be cured before the heat of summer has passed away. Sometimes it is cured with great difficulty, when sowed late, as it requires a great deal of sunshine to cure it well.

A half a bushel of seed to the acre is not a whit too much, although the rule, as laid down by western growers, is eleven quarts.

It yields on good soil about three tons to the acre, and produces from 20 to 30 bushels of seed per acre, worth as much as any other grain to feed to stock; and the quality of the hay is scarcely diminished in value at all, when the grass is not cut till the seed is ripe, it being but about a *week* later than the time to cut it, when the seed is not left to mature.

The value of the hay is fully equal to that of the best timothy and clover, and is as readily eaten by all kinds of stock as that hay is.

A correspondent of the Co. Gent. asks if wheat may follow this grass. Certainly, but not without a spreading of barn-yard manure upon the land, unless it be very fertile. T. B. Miner. *Clinton, N. Y.*

[For the Country Gentleman and Cultivator.]

RAISING CALVES.

Messrs. Editors—After trying various ways in raising calves, I find the following not only the cheapest, but for ought I see as well for the animal as to let them suck the cow or feed them with warm milk from her, wintering better, and worth more when one year old.

Take them from the cow at three days old, milk and feed them till three or four weeks old, and the next three weeks use a small teacup of wheat shorts, well stirred in a small quantity of cold water, then add as much boiling water as will make one half the meal for feeding, putting in new milk for the other half, or even skim milk that is sweet, and the calf will not scour, but will do first rate, if you give scalded shorts alone the fourth month.

W. Winsted Conn., May, 1861. JUDSON WADSWORTH.

Barley for Pork Making.—At a Farmers' Club in Illinois, reported in the Farmer's Advocate, inquiry was made for experience in feeding barley to hogs. One member had fed it, but without comparison with corn, as to value. "It made the best sweet meat, and free from the oiliness so common to corn-fed pork." Another thought barley double the value of corn for fattening purposes. The inquirer said his attention was called to it by the great success of an eastern farmer in fattening pigs on ground barley and milk, getting 300 pounds dressed weight, at nine months old.

[For the Country Gentleman and Cultivator.]

FATTING MILCH COWS.

MESSRS. EDITORS—In the Co. GENT. of April 4, an article on the culture of the carrot, from your correspondent G., contains the following statement:—"When taken in connection with other feed, they are invaluable. They are not only healthy, but will fatten cattle, sheep, and horses. I have fatted and sold four head of cattle this winter on carrots, with one quart of meal sprinkled on them at a feed, together with cornstalks. One was a Durham cow, milked all the while until *sold for beef, and was fat.* This was an experiment, and proved satisfactorily that cows can be fatted on carrots and meal, and milked at the same time. At no time was the meal over two quarts per day."

The idea of fattening cows and milking them at the same time may be a new one to many, but it is none the less true, as I have proved by my own experience, and also that of others. It will generally take longer to fat a cow if she is milked during the time, than it would if she was dry, but the milk will more than pay for the extra amount of feed taken to fat them.

A few years since I had a cow that I wished to sell in the fall, but could not get what I thought she was worth, so I concluded to try the experiment of fattening and milking at the same time. I commenced feeding her with small potatoes, with some partly rotted; after these were gone she was fed with turnips until about two weeks before she was slaughtered, when she was fed with meal. The roots were fed night and morning, and the meal the same. Aside from this the cow had no different care or keeping than the other cows with which she was kept. I commenced fatting her in October, and killed her about the 1st of January, and she made as good beef as I often have. During the time she was fatting she gave about a pailful of milk a day, and I estimated at the time she was killed, that the butter made from her milk during the time she was fatting, amply paid for all the extra feed it took to fat her, and consequently affording the beef which she made at a low price.

Several years since I visited a friend of mine living in New-York city. This gentleman was a pastry baker, and he kept a cow to supply his family with milk and cream. On going to his stable with him to see his cow, I was somewhat surprised to see a *fat cow*, which he milked a pail half full of milk from, and he informed me that the day before he had sold her to a butcher for beef, and that he got the price of first class beef for her. In answer to my inquiry, how he kept his cows? he said it was his custom to buy a new milk cow, put her in his stable, and keep her there until she went to the butcher. He never let them out of the stable, but carried their feed and water to them. They were kept from nine to eighteen months, the length of time depending on how their milk held out, and the condition they got in for beef. They were fed two quarts of meal each day, with what hay they wanted, and they also had the trimmings of the squashes and apples which were used in the bakery, which in the fall of the year were as much as he could make them eat. In this way he secured pure and fresh milk and cream for his family, and got more for his cows when he sold them than he paid for them.

One of my neighbors fatted a cow during the winter on hay and potatoes. At the beginning of winter he commenced feeding her about a peck of potatoes a day, increasing the quantity towards spring; she was also fed what good hay she would eat. She was milked daily till spring, when she was dried of her milk. Having become fat at this time, she was sold for beef, and taken to market.

Wilmington, Vt., 1861. C. T. ALVORD.

☞ The next Annual Fair of the Cattaraugus Co. Agricultural Society will be held at Little Valley on the 11th, 12th and 13th of September.

[For the Country Gentleman and Cultivator.]

Product of Butter per Cow.

MESSRS. EDITORS—I have been much interested in Mr. Wattles' statement of his "Dairy Products" for several years past, because it bears on its face *a naturalness* that commands the confidence of all who peruse it. By it we learn that the *annual product* of his cows ranges from 210 to 280 pounds of butter each, or an average of about 240 pounds per cow—or about three-quarters of a pound per day for each cow. This is not so much as would be expected by those who are accustomed to look upon cows as competent to yield a pound of butter each, daily, through the year. I have known cows that would do this; but I believe they are few and far between. If you or any of your readers have ever known a herd of half a dozen that did as well as this, I should like to be informed respecting them. J. W. P. *Essex Co., Mass.*

[For the Country Gentleman and Cultivator.]

CHESTER COUNTY BUTTER

In the COUNTRY GENTLEMAN of April 4th, I saw an article under the above heading, signed "S. E. M.," and wish to correct an error into which your correspondent has fallen, with regard to *working* the butter he so justly praises in his first paragraph. Chester county dairymen long ago abandoned the "old fogy" ways of carrying their butter to market in a wallet slung across a horse's back, or in a one-horse cart, and also of churning by hand-power. They *do not* work their butter with a "bowl and ladle," nor with a cloth, "rinsing and wringing," &c. They use "Embree's Butter-worker," with which a child, ten years of age, can work 20 lbs. of butter *completely* in less than five minutes, without making it "waxy or salvy," and without breaking the grain or injuring the texture of the butter. Tell "S. E. M." that "a single trial will convince of this." W. D. S. *Westchester, Pa.*

How Long should Cows go Dry?

In answer to this question, a correspondent of the Ohio Farmer furnishes the following sensible suggestions. After saying that no rule could apply to all cows alike, he adds:

"I have found that cows inclined to take on fat could be milked up to within two weeks of calving, and have both cow and calf healthy and plump; and cows that could not be fattened when milking, required from four to six weeks of rest from milk giving previous to calving, otherwise the calf was small and not well formed, and the following year's supply of milk much lessened."

[For the Country Gentleman and Cultivator.]

Colors in the Flower Garden.

In response to a query as to the arrangement of colors in FLORA'S flower bed, I wish to suggest that her circular beds be planted with a centre of the Heliotrope, then a ring of White Verbenas, and on the outside a ring of the Defiance or other scarlet varieties. This will give the "red, white and blue," just now so much in vogue for all sorts of purposes; and a bed of five feet in diameter thus arranged, as it seems to me, could scarcely fail to produce a very pretty effect. BUNTING.

To Kill Cockroaches.

Mix equal quantities of red lead and Indian meal with molasses, making it about the consistency of paste. It is known to be a certain exterminator of roaches. A friend who was troubled with thousands upon thousands of them, rid his house of them in a few nights by this mixture. Put it upon iron plates, and set it where the vermin are thickest, and they will soon help themselves, without further invitation. Be careful not to have any article of food near where you set the mixture.

[For the Country Gentleman and Cultivator.]

How Fowls and Birds Grind their Food.

Fowls have no teeth to grind or masticate their food with, and the best they are able to do with it at first, is, to pick it to pieces and swallow it whole. Kernels of grain are swallowed *whole* by them, and as they are surrounded with a tough pellicle or skin, which the juices of the stomachs of animals will not readily dissolve or digest, they could obtain no nourishment at all from grain, if this tough pellicle were not broken.

Let horses, cattle or people swallow kernels of grain, or ripe seeds of fruit, *whole*, and they will pass off in the ordure unbroken, and most of them will not lose their vitality, in consequence of such a process, and such grain would afford no more *nourishment* than so many smooth gravel stones.

Now if we dissect the gizzard of a fowl of any kind, we find a lot of small gravel stones, which are usually the hardest kind of flint, granite or sand stone. Surely here is a pocket edition of Farm Grist Mills. The *mystery* is, where do fowls find such little flint-like stones, when their abode is on farms, the soil of which is a complete mold or muck, destitute of gravel, or when they are confined in close quarters for month after month, during winter for example, or in a grass yard in warm weather. These little gravel stones are *very important articles* with fowls—quite as important as the teeth of ruminating animals.

Fowls swallow their food, broken or not, and it enters the crop or first stomach, and remains in it until it has become softened, more or less, when a small quantity at a time, just as grain runs into a grist-mill, is forced into the gizzard, among the gravel stones. This gizzard is a strong muscuious stomach, and plays night and day, when there is a grist to grind, similar to a bellows, contracting and expanding, thus forcing the gravel stones into the grain, and breaking it to fragments, and triturating the whole mass; after-which, it is in a suitable condition to be quickly digested. Of course, these little stones will become *very dull*, after having been in operation for a month or two, and the gizzard, like an economical miller, throws them out of doors, and demands a better set; and if they are not furnished, of course the grist is not half ground, and of course more than twice as much food is necessary to sustain life, and form eggs, as would be required were it well ground; and of course the eggs of fowls would cost double in this case, that they would in another with the same food. This suggests the importance of supplying fowls and birds in cages with plenty of sharp gravel stones, and of having their food bruised or ground fine before they eat it; and it suggests

The Importance of Allowing Fowls to Feed themselves.

When fowls have access to grain all the time, we see them eat, in the morning only a few kernels at a time, and after an hour or so, they will take a few kernels more, and thus they pass the entire day by eating a little at a time, and very often.

The philosophy of their eating so frequently and but a little at a time, is, the food has a sufficient time to become softened in the crop before it passes into the gizzard, and it has sufficient time to be thoroughly ground and digested; whereas, when fowls are not allowed to have access to their food, but are fed once or twice a day. they become very hungry, and swallow as much as their crops will hold at one feeding. Now for several hours, no food will be softened sufficiently to pass into the gizzard, consequently their grist mill must stand idle. Now the moistened grain swells and distends the crop of the fowl, and it feels by no means comfortable. Shortly all the food in the crop is in the proper condition to be ground, and the result is, that it is forced through the gizzard with so much rapidity, that it is not half ground, and therefore cannot be half digested; and if it is not half digested, of course not half the nutriment, or egg producing material, can be extracted from it. Nor is this the greatest drawback attending feeding fowls only once or twice a day. When a fowl fills its crop at one feeding, before the food can possibly get out of it, it begins to heat up. and derangement and ill-digestion follow, very much as is the case when we fill our stomachs as full as they can be crammed.

The way to feed fowls, and particularly those that are laying, or being fattened, is to allow them to have free access to food at all times. In this way they can always supply the demands of their stomachs and grinding apparatus, exactly as food is needed; and they will fatten more rapidly, or lay more eggs, and consume much less food, than they will if they are fed as much as they will eat twice a day.

My practice now is, and always has been, to allow my fowls to have free access to corn in the ear all the time, both summer and winter. Of course they are obliged to shell it for themselves. Occasionally we feed them screenings, and when we have no screenings we take a peck or so of wheat, and as much buckwheat, oats, barley or rye, and mingle them all together, and mix the grain with some chaff, so that they will not be as liable to consume as much of it at once, as if it were clear grain. When we have an abundance of milk, we place a vessel containing it where they can find it at any time. In warm weather, after it has become loppered, they will consume during the day, much more of it than one would suppose. And milk is as good to fatten poultry and make chickens grow, as it is for pigs; and it is one of the very best kinds of food for any kind of poultry, when they are laying.

Lake Ridge, Tompkins Co., N. Y. S. EDWARDS TODD.

[For the Country Gentleman and Cultivator.]

FECUNDITY OF THE PIG.

As a matter of curiosity we sat down a few evenings since and made the following calculation of the fecundity of the pig. Would you credit the assertion, that in ten years, from two breeding sows, many millions can be produced? Would you suppose—for we certainly had no conception of the fact—that more than the present population of the country for ten years to come, is not equal to the number of pigs to be thus born and bred in the same period, if we choose? But we shall proceed to the proof, and give the figures, which are unanswerable arguments when well founded. The calculation is, that in one year two sows will produce ten pigs each, of which we shall assume that one half are females, and proceed on that assumed equality.

The first year there will be twenty males and females; from which take ten males, and we have as the result ten as breeders. The second year then we may take the same ratio of ten to each, and it gives 100 males and females, consequently leaving 50 for breeders the third year. Applying the same principles throughout, viz., third year, 500; fourth year, 2,500; fifth year, 1,250; sixth year, 62,000; seventh year, 312,000; eighth year, 1,562,500; ninth year, 7,812,500; tenth year, males and females, 39,062,500! Have we not brought our pigs to a good market?

But to equalize the supply we shall for the present purpose take only the male half of the pig population for food, leaving the breeders to go on. In this way, then, we can kill and eat 10 the first year—no bad increase from two sows, recollect; the second year, 50; the third year, 250; the fourth year, 1,250; the fifth year, 6,250; the sixth year, 31,250; pork in abundance now—the seventh year, 156,250; the eighth year, 781,250; the ninth year, 3,906,250—still more abundant; and the tenth, when divided in like manner, the enormous quantity of 19,531,250 for food, without interfering with the breeders, who we presume by this time will probably require killing also.

Now we are not aware that much commentary is required on this prolific subject. Every one who reads this short paper, will at once draw his own conclusions from the facts. They are, however, of a very cheering description, and drawn from the breeding of one domestic animal only, and amply prove what abundant stores Nature, and the God of Nature, have provided for human subsistence. We shall close this article with this observation—after all, it is by practice only that the benefits open to all are to be received:—

We will, for the sake of argument, suppose that the State of New-York contains thirty-one thousand agricultural families or farmers. It is a very easy matter for each to keep two breeding sows, which in three years would produce, in round numbers, fifteen millions!

Springside, 1861. C. N. BEMENT

He who feels his own deficiencies will be a charitable man for his own sake.

Inquiries and Answers.

CHARCOAL AS MANURE.—We are located in a well timbered country, too remote from a market for our refuse wood to use it profitably; and our lands require fertilizers to make their cultivation remunerative. Now it has occurred to me that as chemistry assigns to carbonate of lime and charcoal the same principal constituent, viz., carbon, that to compare the price of lime, which costs 17 cents per bushel, with that of charcoal, which costs 5 cents per bushel, that charcoal would be the cheaper fertilizer, unless there is something connected with its use that I am not acquainted with. If you, or any of your readers, can give me any information, it will be thankfully received, regarding their relative value, particularly as regards the utility of charcoal as a fertilizer; it is not used here, but lime is extensively. D. D. GITT. *Arendtsville, Adams Co., Pa.* [Lime and charcoal are entirely distinct in their operation on land. The carbon in carbonate of lime is in such a state of combination as not to be regarded as manure. It is the lime only that is valuable. Many statements have been made of the great value of charcoal, but none, that we are aware of, that can be relied on to show its effects as compared with other manures. Many are familiar with the fact that the site of a coal pit continues unusually fertile, often for more than half a century, but we do not know how much credit to assign respectively to the charcoal, alkali, burnt earth, &c. We can only recommend to our correspondent to try several accurate experiments on a moderate scale. We are inclined to think that where charcoal is only 5 cents per bushel it might be most profitably used by pounding fine, and mixing in compost with the richer or more concentrated manures.]

HEN MANURE.—I have some ten bushels of hen manure, saved since last August in the dry, and would be glad to learn the best mode for using it, particularly for corn and potatoes, or garden vegetables. I intend planting 8 acres with corn, and 2 with potatoes, and as my garden is rich enough, I thought it would be best to use it on those crops. As I presume it would not answer to apply it without some admixture, I desire to learn the best mode of composting it, and then of applying it. As this is a kind of manure which every farmer can have, an answer to my inquiry through your paper may be of great service. M. R. *Newton, N. J.* [First pulverize the dry hen manure thoroughly. It may then be mixed with plaster, dried peat, &c., and thus constitute a concentrated compost. But an easier way, and nearly if not quite as good, is to apply the powdered hen manure at once to the earth. A spoonful will do for each hill of corn; scatter it over several inches square of surface—if 8 or 10 inches square all the better. One or two strokes of the hoe will mix it; then drop the corn and cover it. Billings' and other corn planting machines, will drop the hen guano with corn, with a stratum of earth between.]

PLOW FOR STONY GROUND.—I want a new plow; which is the best kind for land such as mine, in which are some fast rocks, lime-stone and others, and many round stones from the size of a large apple to that of a small watermelon. I want to plow deeper than has been usual in this neighborhood. M. R. [There are so many good plows of different patterns made in all neighborhoods, that we could not point out the best for each. Our correspondent should examine the different manufactories or warehouses, and make his own selection. For stoney ground, the plow should be short, so as quickly to enter the ground, if thrown partly out; or so as to vary readily from the right line in passing around the larger stones.]

ARBOR VITÆ HEDGE.—Please to inform me through THE CULTIVATOR what distance apart Arbor Vitæ plants shoud be set to form such an hedge, as is illustrated on page 121 of the April Cultivator—also the height of the plant when set out, &c. A. GLEASON. *N. E Village, Mass. April* 13th, 1861. [The plants should be about two feet high, unless they have to be brought from a distance, when one foot would be more economical of freight. For a regular hedge the distance apart may be about eight inches, but a good screen merely, may be made by planting them two or three feet asunder.]

POUDRETTE.—I see you answer all sorts of queries in your valuable paper. I wish to know if the poudrette of the Lodi Manufacturing Company, is to be used as a top-dressing for corn, as we use plaster, or to be used as manure, by putting in the hill with the seed. TOM. [It is not used as a top-dressing like plaster, although sometimes applied usefully as a top-dressing to lawns and grass lands in autumn. Ordinarily it should be mixed with the soil like other composts; and being a concentrated manure is especially useful to apply in the hill.]

WARTS ON HORSES.—Will you insert in THE CULTIVATOR, a remedy for blood warts on the legs of a horse. They are nearly the size of a man's fist, are very painful, and bleed considerably. J. C. HICKS. [The following is Dr. Dadd's remedy for warts:—A wart having a broad base should be treated in the following manner: Take a common suture needle, and arm it with a double ligature; each ligature is to be composed of three threads of saddler's twine, well waxed; pass the needle right through the center of the wart, close down to the skin; tie each half separately, with a *surgeon's knot*, as tight as possible; cut the ends off pretty close to the knot, and in the course of a short time the whole will drop off. A wart having a small circumscribed pedicle may be removed in the same way, by tying a *single* ligature around its base. If the exposed surfaces should not heal readily, moisten them occasionally with tincture of aloes and myrrh; and if they show a disposition to ulcerate, sprinkle them with powdered charcoal and bloodroot, equal parts. Warts about the sheath or penis should be removed by excision; to do this we often have to cast the animal, the consequent hemorrhage to be arrested with tincture of muriate of iron or styptic.]

THE DISEASED PIGS.—I notice an inquiry in Co. GENT., of May 2d, in relation to a disease in pigs, which I think we had at my father's some years ago. Some one told him it was caused by worms in the kidneys, and if he would soak corn in lye from wood ashes, and feed them with it, it would cure them, and as far as I remember it always had the desired effect. I remember finding worms about the kidneys of such as had been affected in that way, when we came to dress them at killlng time—I think in the fat, but it is some years ago and I was quite young and do not recollect very distinctly. I remember we had more or less affected until we changed the breed. If H. D. C. will try soaking corn in lye, and feeding his pigs, I think it will do no harm and may cure them. E. T. C.

River Farm, Pa.

AGE OF CATTLE AND SHEEP, &C.—1. How can I tell the age of cattle and sheep by the teeth?—2. Does a good *butter* cow make the most cheese, and if not, why?—3. Is there any good reason for the practice, common in many places, of "cutting off," or slitting the end of the *tail* in neat cattle, at this time of year, and in fact in nearly *all cases* of sickness?- If so, the "why and wherefore," and if not, the same?—4. Is corn meal better, ground fine or coarse, for feeding cattle, and why for or against? A SUBSCRIBER. [1. A full account, with cuts, of the changes in the teeth of cattle, will be found in Flint's Treatise on Milch Cows and other works on cattle. All works on sheep show the mode of determining their age.—2. A good butter cow is usually a good cheese cow, and vice versa—although the curd or element of cheese and the fatty, or element of butter, are distinct qualities. Cheese is made *rich* by the butter intermixed. Cows which afford an unusual amount of curd are most profitable for cheese making—and those yielding largely of butter, for butter making.—3. The tail remedy is doubtless a fancy—but many farmers are sure of its powerful efficacy.—4. Corn meal is regarded by many farmers as best when rather coarse—but we do not know of any authentic experiments.]

FEEDING SHEEP—UNGROUND GYPSUM—MADDER.—1. I am just commencing to raise a flock of sheep. I have five ewes of the native scrub breed—(improved breeds scarce and not to be bought,)—cost five to six dollars. I wish to know whether it is best to feed sheep grain, or whether they will do best on roots, and what kinds, and hay.—2. Will the gypsum as it is dug from the bed, serve as a manure upon its being crushed—if so, what is its value when compared with stable manure?—3. I wish to grow my own madder—how shall I go about it? I have the seed, and would like to know what sort of land, manure, &c., as well as the best mode of cultivation. S. *North Bend, San Pete Co., Utah.*—[1. A little grain of any sort will no doubt improve the growth of the "native scrub" sheep—begin very moderately, and increase gradually. A portion of their food in roots, would also be advantageous, observing still greater caution to begin with small portions. A mixture of grain and roots with dry fodder has an excellent effect. Red clover, provided it is perfectly cured, is excellent for sheep—and they do well on nearly all cultivated grasses.—2. Gypsum, if crushed *fine*, would answer a good purpose; but as in this state it would dissolve more slowly, it should be in larger quantities, according to the degree of coarseness, and should be applied sooner in the season. A bushel or two per acre is the common rule, when it is ground to fine dust. It cannot be com-

pared with common manure, as the action of the two is entirely different. In rare instances, a bushel of ground gypsum per acre, has doubled the growth of the clover crop—in other and more common cases its effects have been imperceptible. Our correspondent can ascertain the value on his lands by trial only.—3. Madder grows best on deep, rich, sandy loams, with plenty of vegetable matter. The seed should be sown a year before they are transplanted—which is done eight or ten inches apart. The plants are cultivated with prong hoes. The crop is usually taken at the end of the third autumn. There are other modes of management, but we are not prepared to say which is best, or to give the advantages of each.]

PEACH ON PLUM STOCK.—1. Do you consider the Canada plum, (Prunus Americana) the best *stock* for budding the peach on—if not, which one do you consider the *best?*—2 Will the buds take readily?—3. How long before they come into bearing from the bud?—4. How long will they live and thrive on the plum? D. A. T. [1. The Canada plum is chiefly used for the peach, when it is worked on the plum, and is undoubtedly best for this purpose, next to the peach stock itself. —2. The bud takes readily and grows freely, if the stock is young, thrifty, and in a growing state.—3. They will, as a general rule, bear a little sooner than on peach stocks, but the difference is slight. The peach on its own roots usually bears in three or four years, sometimes in two years; and on plum stocks not much sooner.—4. It is hard to say how long they will live and thrive—especially as there is a great difference in this respect with common peach trees in different localities—in some places they do not survive ten years, while in others they live forty or fifty. We have no knowledge of very old peach trees on American plum stocks; can any of our readers give any information on the subject?

QUINCY ON SOILING.—Two years or thereabouts ago, I saw an account of a Massachusetts gentleman (I think Mr. Quincy,) keeping his cows in yards and stables the year through or soiling his stock, as the term is used. It was published in your CULTIVATOR, but gave no particulars of his mode of feeding, &c, during the summer, the profits of it, &c. I should like to read his experience or that of some one else that has tried it. O. T. S. *New-Hackensack.* [We can send you "Quincy's Essays on Soiling Cattle," by mail post-paid for 75 cents. You will find his experience therein detailed at length.]

WHEAT ON SOD GROUND.—I read with interest in the last CULTIVATOR, an account of J. T. T. of West Chester county growing wheat on sod. I and many others, probably, would like to know his whole process of preparing his ground for the wheat, through the Cultivator—the time of plowing, how often, when, and how he applies his manure? A SUBSCRIBER.
Quakertown, Penn., 4th mo. 17, 1861.

SOILING CATTLE.—I desire to commence keeping my stock on the "soiling system," but I am almost entirely ignorant of what I need in the shape of an enclosure and its appurtenances—also of the kind of crops best adapted for green food, and also of the probable expense. My stock consists of 40 cows and heifers, and four horses. Can you either give me the desired information through your valuable journal, or give me the address of some person who would be likely to know about it? A NEW SUBSCRIBER. *Oneida Co., N. Y.* [The change from the old system to that of "soiling," is too important to be undertaken until one has thoroughly informed himself as to all the details necessary for the successful adoption of the new system. We shall be glad to hear from any of our readers who have had practical experience in "soiling," and would also refer our correspondent to Quincy's Essays on Soiling Cattle, which we can send for 75 cents.]

PRESERVING FRESH FRUITS.—Please inform me through the Co. GENT., if all kinds of fresh fruits, such as berries, plums, cherries, peaches, &c., can be preserved over winter, if the air is exhausted from the jar by an air pump, without the fruit being scalded, as is usually done at present. C. BYLES. [The mere exhaustion of the air will not preserve the fruit—it contains within itself the elements for active fermentation, if outward air is entirely excluded. As a general rule, it must be at least slightly scalded, that is heated up to the boiling point of water. A large quantity of sugar will doubtless require less cooking than when smaller portions are used. Green or unripe gooseberries will keep if corked tight, and kept in a cold place, without any cooking or sugar.]

ZINC PAINT.—There is one question I should like to ask through THE CULTIVATOR. Which is the most desirable for house painting, white lead or white zinc, both inside or outside of the building? A SUBSCRIBER. *New-Jersey.* [White lead is decidedly the best paint, although not so cheap as zinc. The latter is apt to scale or peel off the outside; but we are informed that one or two coats of lead applied first, will prevent this difficulty. Zinc for inside work does not retain its color so well as white lead, but is successfully used where color is added.]

HAY ELEVATOR.—Can you inform me if the Hay Elevator advertised in your paper is approved of, and how much the smallest size, *without* pulleys and ropes, (which I have already fitted, will cost? C. T. S. *Harvard, Mass.* [We have never witnessed the operation of the hay elevator spoken of, but have no reason to doubt its value and efficiency. The hay-fork worked by a horse, has long proved the value of well applied horse power to pitching hay—we have known hay to be unloaded, by its assistance, at the rate of one ton in two and a quarter minutes, where the mow was on a level with the load. Our correspondent may learn the cost of the elevator by addressing the manufacturer, whose address was given in the advertisement. If advertisers would always mention prices where practicable, it would be a great advantage to all parties. As a general rule, an advertisement with prices given, is worth at least three without.]

[For the Country Gentleman and Cultivator.]

Experience with Chinese Sugar Cane.

EDS. CO. GENT.—The hue and cry about sugar cane has nearly subsided. Still, now and then, one sends in his experience, either for or against it. Now I was and am one of those who are led away, as my neighbors say, by every thing "new and uncommon," and of course had to be haltered by cane. The first season I tried it, which was in 1857, it was planted the same day the corn was planted, and on the same kind of soil, and received the same care, and the result was, it just made out to head or tassel. The next year it was put into the best and warmest soil I had, and extra care taken of it, and it did not ripen its seeds before Jack Frost visited us. The next trial, I procured seed from Minnesota, raised in latitude 47° North—planted them the same time I did corn, and cultivated the same, and not a stalk headed.

You will see by an article in the Co. GENT. of May 2, that I always plant corn on sod inverted just before planting, and the cane was planted beside the corn and at the same time. I have known cane to be raised in this neighborhood, and get ripe; but one thing is settled in my mind, and that is this: *You cannot raise sugar cane where you can corn, and with the same care no and more.*

Springwater, N. Y. BYRON

[For the Country Gentleman and Cultivator.]

CORN FODDER AND CUTTING IT.

Your correspondent, J. L. R., finds no advantage in cutting cornstalks. His experience is the same as that of many others. The stalks are all cut too long, forming hard solid chunks, which cattle don't want. But when cut short enough—say about one-sixth or one-eighth of an inch, forming a material nearly as fine as chaff, cattle eat all. A large and successful farmer attached the right kind of cutter to his six horse power, running them through with great rapidity, and reducing them nearly to powder; three or four hours would enable him to cut enough for his large herd for a week. If the stalks were good, not rotten nor mouldy, there was not rouble about having all eaten. X.

RELIEVING CHOKED CATTLE.

A Portland correspondent of the New-England Farmer, gives the following easy and simple remedy. If any of our readers have occasion to try it, will they please write us the result:—

The instant a creature becomes choked, no matter what with, the throat becomes dry, and the longer the substance remains, the dryer the throat. The following is a sure remedy. Take some oil, no matter what kind, and hold the creature's head up and turn down about one gill of oil, and then let go of the head, and the creature will heave it out in two seconds! I have tried it for years, and never knew it to fail.

THE CULTIVATOR.

ALBANY N. Y., JUNE, 1861.

☞ If there is a constant tide from Country to City, swelling the numbers of those whose ideas of Nature are mostly derived from the pavements beneath and brick walls around them,—there is an important ebb already noticeable in the contrary direction, carrying back again to the country the capital gathered in city pursuits, together often with a spirit of improvement and enterprise which it must be confessed is not always manifested by those who have never had any other occupation than the Farm alone provides. "There are numbers of men every year now-a-days," writes an observant friend in a private letter just received, "who are leaving business in the cities and large towns, and retiring either to the old homestead in the country where they were born, or to other farms they have purchased, which they intend to improve highly, and to convert into attractive, pleasant rural homes. Almost every man now doing business in the cities, who went there a boy from the country farm, has an ideal or longing desire, or settled determination, that some day he will go back to the country and have him a grand farm, nice stock, pleasant home, &c. Numbers of this class, just as soon as they have accumulated some capital, do actually carry out this determination, and actually realise their ideal of life, in so far as mortal man can realise his ideals and desires in this world of disappointments and unexpected changes."

This kind of sentiment is one that should be encouraged in every possible way. It increases the links of common interest between city and country. Each shares more freely with the other, its peculiar advantages. The ex-citizen may blunder and spend his money foolishly, in search rather of recreation than of profit. But we could point to other cases; in which the merchant has thrown down the ledger of imports and exports—the tradesman given up the order-book—the mechanic laid aside his tools,—to take up farming with something of the same discrimination, accuracy, good judgment and workmanlike execution which had been taught them in other pursuits; and to apply the capital of their money or labor in such a way that it should yield its dividends from the soil as well as behind the counter. And if Agricultural Schools have any one particular mission before them which they ought not to overlook, it is perhaps the inculcation with their pupils of more business-like habits, in account-keeping and otherwise, and of the more workmanlike completeness and nicity of the tasks they undertake, which in all trades distinguishes the good artisan from the bungler.

☞ Anything that sheds light upon the causes or the cure of the Potato rot, is of great importance, and a recent contribution to one of our foreign exchanges—it has been so widely copied that we are uncertain in which of them it first appeared—suggests a means of prevention which has the merit, we think, of novelty at least. Reasoning that the disease "is due to the deposition by the atmosphere of a minute fungus, which, taking up its habitation first upon the leaf and the haulm of the potato-plant, propagates with astonishing rapidity, and ultimately finds its way to the tubers and completely destroys them"—the writer argues that this "fungus" is washed down to the tubers by means of rains. He tried an experiment in planting a large part of his crop "in double rows instead of single, the two rows occupying about a foot in width, a foot of vacant space remaining on the outside of each row. They were planted upon the level ground, and hoed up at the usual time." When the tops had attained their full growth, about the first of July, he *turned them over* right and left "toward the vacant spaces, by adding earth between the rows and pressing down the haulms, so as to prevent their retaining an erect position, and to allow the rain, instead of descending to the roots, to run off upon the vacant space." The land employed is characterized as "a heavy clay, about as bad a description of soil as can be devoted to the growth of a potato crop." The result was with the "Regents," a part of which were thus treated, and the others in the ordinary way—that the former turned out to be a good crop, "while those upon the old plan were a complete failure, although grown upon the same plot of ground, and planted at one time from the same seed." The remainder of his potatoes were "Flukes," all put in on the new plan, and yielding "an excellent crop, not two in a hundred being bad," while his neighbors, for miles around, without exception, lost their crops.

The same writer states that others have tried his system with equal success. Its simplicity renders it easily tested, and the statements made appear sufficiently probable to be worth the extra trouble involved for the trial. A case is given in which a number of plank were thrown down upon a potato bed—in accordance with the foregoing philosophy, although not designedly done—and the potatoes on being dug proved to be in excellent order, while those all around exposed in the ordinary manner "were completely destroyed."

☞ Our Wine growers will have an excellent opportunity in 1862, to offer the World a fair test of the vintages of American production. In the Great Exhibition to be held at London, the Commissioners propose not only to allow the sale of wines in the building, but to permit exhibitors to bring their wines before the public for consumption. In 1851 the orders were that no sales whatever were to be allowed in the building; in 1862 growers and importers of wines who send in wines for competition —it can scarcely be called for exhibition—will be allowed to "hand to visitors cards containing the names or description of the wines, stating that the same may be obtained at such or such a refreshment department; and there visitors may test and try as many vintages as they please, without let or hindrance from the Commissioners." We shall be glad to see Longworth and his compeers side by side with the French, Rhenish and Swiss Wine growers; it is to be hoped they will not overlook the excellent opportunity that will be afforded them.

☞ A meeting of the Executive Committee of the N. Y. State Ag. Society was held last week at Watertown. The grounds offered by the citizens of that place for the location of the next Fair, were examined, found well adapted for the purpose, and accordingly accepted. They comprise the grounds of the County Society, including about fourteen acres, together with the adjacent track and horse trial ground—both already well enclosed, and provided with numerous buildings, which will answer in part for the requirements of the State Society in September next. The situation must be less than a mile from the railroad station, and but little more than a mile from the central portion of the town; soil dry and sandy, and surface well sodded, so that in case of rain there will be no discomfort under foot. The undertaking on the part of the citizens of Watertown is in the hands of those who will do their best to satisfy all the demands of the Agricultural public. As an instance of their enterprise, it is proposed, we believe, to offer special prizes to a considerable amount, on their part, to those who shall cultivate and contribute the most flowers and plants for the decoration of the buildings at the time of the Fair. This is a good idea, and worthy of imitation elsewhere.

With regard to the Summer Trial of Farm Implements and Machinery, which was mooted at the Annual Meeting, and for which very liberal propositions had been laid before the Board at their last session from the cities of Auburn and Syracuse, and subsequently from Geneva, it was now *resolved to defer* this very desirable event until a season of less political excitement; there being little probability that manufacturers from the East and West would care, in the present condition of the country, to join with those of our own State, and render the occasion what was previously contemplated by the Society, and de-

manded, we think, by the public, *a more general and complete test* than any that has previously taken place in the United States.

☞ The "Royal Dublin Society" of Ireland, established as long ago as 1731, held its customary Spring Show early in April—from a summary of the results of which in the North British Agriculturist, we learn that the turnout "of Short-Horns was extensive, and competition generally well sustained. Herefords and Devons were not so numerous. The Ayrshire and Polled Angus were scarcely represented. The show of sheep, pigs, poultry, and horses, was rather limited in the numbers entered." With regard to the implements and machines the Irish Farmers' Gazette pronounces the exhibition, "in point of quality, excellence, and adaptation, the best the society ever had: all the principal English manufacturers having at great expense come forward with a choice selection of their best."

But the main purpose of this note, was to call attention to a fact referred to in the first paper above quoted, and of which we were not before aware, with regard to the support heretofore and now extended to this important Society, by Government. For some years after its first organization it was dependent upon voluntary subscriptions, "which annually amounted to about £1,000. After a few years of usefulness, the Irish Parliament voted annually the sum of £10,000 [$50,000!] to the funds of the Society. After the Union with Great Britain the sum granted by Government has been usually £6,000, [$30,000!] which sum is annually voted in Parliament."

Now the Legislature of the State of New-York,—which is considerably larger than Ireland in total area, and has a very nearly equal surface of arable land in actual cultivation,—annually donates the munificent sum of $700 to its State Agricultural Society and—prints its Transactions! We confess our inability to discover any point of view from which the development of our Agriculture appears less important than that of Ireland; or the Agricultural Society of our State a less worthy and efficient agent in accomplishing it, than the "Royal Dublin," if it was placed in the possession of similar means.

☞ "Perhaps, knowing me to be a friend," writes an esteemed correspondent, "you will excuse my saying that now and then it would seem that you do not realize that the mere fact of your publishing a statement or communication gives it a certain degree of authority."

— We copy this friendly criticism for the purpose of saying—as we have on various occasions said before—wherein we do, and do not, exercise an editorial "censorship" over the contributions sent us.

Nothing that we publish over the signature of a correspondent should derive any "authority" from the fact of publication, beyond this—that we have reason for supposing the writer of it to be trustworthy in his statement of facts, and sincere in entertaining the views he expresses. For the *correctness* of neither, however, do we assume any farther responsibility; it is for each reader to judge each statement or communication upon its own merits alone, particularly in those cases where matters of theory and opinon are involved, rather than mere questions of fact. If a writer states that he killed a pig weighing so many pounds, his assertion, which we have no reason to doubt, goes forth in our columns over whatever signature he may have attached to it, and like any other assertion, there is nothing concerned beyond the veracity of its author. But if he goes on to say that this weight was a consequence of certain treatment which the pig has received, or even (for the sake of the argument) that it was owing to the pig's having been born at a certain time of the moon, or on a particular day of the week, then he brings forward a theory with regard to the facts asserted—the probability of which, it rests entirely with him to support by such arguments as he can. The reader is particularly requested and warned to *take nothing for granted*; the burden of proof rests with every writer who goes beyond the range of axiomatic or admitted truths, and the proof that is advanced, should in all cases be subjected to careful scrutiny.

"Suppose, however," our friend might rejoin—"suppose the argument of some correspondent to be plausible in appearance yet erroneous at base,—would you then permit it to appear in your columns at the risk of misleading careless or injudicious readers?" This always depends very much upon the character of each particular case; the risk involved is often counterbalanced, partially at least, by one result, and we may have encountered it for the very purpose of accomplishing this—namely, the strong probability that arguments and experience on the side of more correct views and a truer theory, will be elicited from those who otherwise would not have spoken at all. There is a reluctance felt by many, about coming forward with *their* practice and opinions, unless there is some occasion which renders it essential—some discussion going forward, in which every fact on the right side, *will tell* to good advantage. In the columns of an Agricultural paper, as in a hall of debate, we believe in "freedom of speech" whenever possible; and we do not object occasionally to smile over something that is seriously at fault, if in the end it provokes a useful controversy and draws new facts from private practice into the service of the public.

But it should not be forgotten, in the present uncertain state of agricultural knowledge, that there are many points, about which, being ourselves mostly in the dark, one opinion may be nearly as good as another. Hence, when views are expressed that do not agree entirely with our own, our first desire should be to ascertain precisely under what controlling circumstances those views were formed; perhaps a change of circumstances would justify a change of our opinion. And we may close with this hint to correspondents—that they cannot do better service for our readers and the cause of truth, than to communicate at once—when anything found in our columns differs from what they believe to be correct—their own experience in the premises, in order that the views they hold, with the circumstances which led to their adoption, may be placed on record as a protest, or as an antidote to those which are criticised—or, at least, that they may assist us all in deciding in what condition of affairs one opinion is likely to be advanced, and in what localities or climates, on the other hand, contrary views are actually found to have the preference.

The Cultivator—Progress Perceptible.—A New-Brunswick friend—a clergyman—writes:—"It is with much pleasure that I enclose to you a club of 10 for your valuable paper. It is gradually extending its circulation, and another year, D. V., I hope to send as many more. I have the bound volumes for the last nine years, and certainly consider, for the practical information and useful suggestions contained in them, that one volume is worth what the whole nine cost me. I am endeavoring to get my people, as a general rule, to take it, for I have noticed that wherever a good agricultural paper is taken and appreciated—and yours I consider one of the best—there you will find a different system. If the farmers of our Province would open their eyes, and allow that theory and practice should go together, our agricultural statistics would in a few years present quite a different appearance. There is a change, I am pleased to say, taking place. Cattle of improved breeds are more eagerly sought after, root culture more widely followed, and farms in some localities are managed as they should be—that is systematically and with an eye to the real improvement both of the farm and pocket. C. P. B.

Husking Corn.—I noticed in one of your papers a piece about husking corn. We have men on Long Island who can beat it. I had a man in my employ last fall, who husked in four hours in one forenoon, one-hundred and twenty-five bushels of corn, and put it in the wagon. Two of my neighbors and myself measured it, and know it to be correct. The corn was the large white, quite as good as common for this part of the country. The man is about twenty-one years of age; his name is Patrick O'Flanigan. H. P. *Suffolk Co., L. I.*

☞ We are indebted to Prof. E. N. HORSFORD, of Harvard University, Cambridge, Mass., for a Pamphlet just prepared by him upon a very important subject—the Theory and Art of Bread-Making, to which he has evidently devoted much attention. After describing and illustrating by means of several finely executed engravings the composition of the Wheat Grain, the difficulties of bread making, and the effects of the fermentation therein employed according to present methods, he proceeds to develop a new process devised by himself, without the use of ferment, and intended to economize the nutritious constituents of the flour, save time and labor, and obviate uncertainty in the quality of the bread that is made—"by providing agents of known qualities and strength, to reduce to a minimum the measure of skill required."

Several months ago we laid before the readers of the Co. GENT. an outline of the method devised by Dr. Dauglish, an English gentleman, having in view the accomplishment of similar results. Dr. D.'s process, we believe, proved entirely successful in practice, where it could be adopted, as in large bakeries, upon a sufficiently extensive scale. The mode which Prof. HORSFORD now brings to public notice, judging from the account here given of his experiments with it, will be equally as advantageous for family use as for the largest public establishment—enabling, it is said, "a single person to prepare four loaves of a pound each," within five minutes time, the baking of which—they being at once placed in the oven—will occupy from thirty to forty-five minutes more.

We presume the process invented by Prof. H. will ere long be placed within reach of the public—in the form, probably, of raising powders prepared according to the conditions he enunciates, with scientific accuracy, and in conformity with more correct principles than have hitherto obtained.

☞ We have received through Mr. Secretary JOHNSON the Regulations adopted by Her Majesty's Commissioners, for the International Exhibition of Works of Industry and Art, to be held in London in 1862, to which we have on several occasions already called the attention of our readers. The Earl Granville, K. G., is Lord President of the Council, and F. R. Sandford, Esq., 454 West Strand, London, Secretary.

It is to be hoped that the present difficulties in which this country is unhappily involved, will not prevent the United States Government from appointing at an early day a Commission to communicate directly with the Commissioners of Her Majesty. It is through such a medium *only* that articles of Foreign manufacture are to be admitted, and exhibitors in other countries can have no intercourse with the direction of the Exhibition, except through the Commissioners appointed by their respective governments. "Her Majesty's Commissioners will communicate to such Central Authority the amount of space which can be allowed to the productions of the country for which it acts, and will also state the further conditions and limitations which may from time to time be decided on with respect to the admission of articles. All articles forwarded by such Central Authority will be admitted, provided they do not require a greater aggregate amount of space than that assigned to the country from which they come; and provided also that they do not violate the general conditions and limitations. It will rest with the Central Authority in each country to decide upon the merits of the several articles presented for exhibition, and to take care that those which are sent are such as fairly represent the industry of their fellow countrymen."

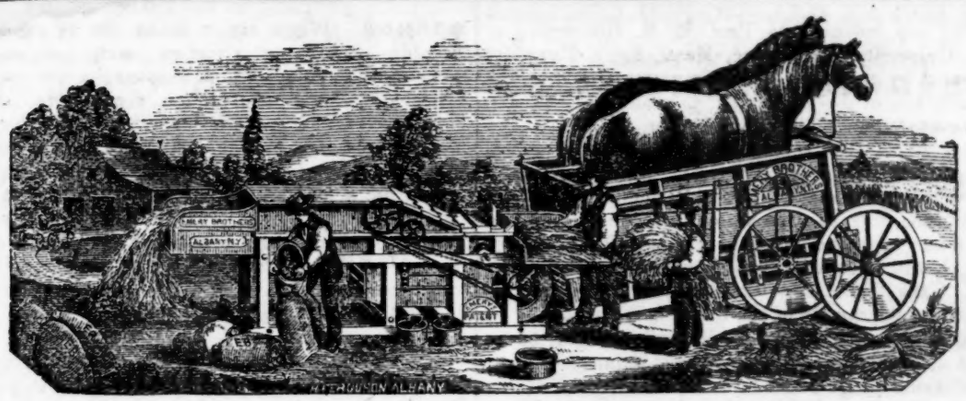
☞ The prospects of the crops abroad, as well as at home, will be watched the present season with unusual interest. Under date of April 29th, the Mark Lane Express reviews the conclusion of the spring sowing season as follows: "The continuance of fine weather, with a highly raised temperature, up to Friday night, has given a stimulus to vegetation generally, both the meadows and corn-fields exhibiting the beneficial change. Sowing may now be considered complete throughout the United Kingdom, and under more favorable circumstances than lately anticipated. Warm nights would now be extremely serviceable after Saturday's snow; and, with steady summer weather following, a seasonable harvest may be expected. *But no weather can replace the loss of wheat plants, or make those that are very weak productive; and the fact remains that less than an average breadth is sown of the most important grain.* With much occupation in the fields, farmers have been too busy to send average supplies to market. Prices, however, have scarcely been supported for good qualities, and the rates of inferior have still been drooping, with sales more difficult, the influence of finer weather and fair foreign arrivals producing the usual effects."

☞ The Sale of ALDERNEY CATTLE belonging to JOHN GELES, Esq., took place at Woodstock, Ct., pursuant to the advertisement in our columns. Sixteen thorough bred Alderney cows and heifers were sold—one, an imported cow, now four years old, called "Star," for $240, and one, of Mr. G.'s breeding, named "Gault," for a still higher figure, $245. The two next highest were "May Day" and "Zilla" at $170 each; and the average of the whole sixteen was about $128—which we think doing very well indeed "for war times." Seven grades were sold at from $20 to $30 for young heifers, to $45 and $50 for cows. The stock is very highly spoken of by those who were present, and the aggregate of the sale was about $2,400.

☞ The MARKET FAIR of the Bedford Farmers' Club was held at Katonah, Westchester Co., pursuant to the announcement published in our columns. The weather, especially on Wednesday, the 1st inst., was not very favorable; the second day, Thursday, was a little more comfortable. The chief feature of the occasion appears to have been the exhibition of Farm Implements, and a trial of Plows. We have seen no report of sales effected, either of live stock or farm produce; but it is stated that the desire was expressed by farmers in attendance "to have these market fairs held at least once a month. If a suitable piece of ground could be obtained, and the right kind of permanent sheds constructed thereon, containing stalls sufficient to appropriate one to each regular contributor of produce, and fix one definite day each month for holding the fair, there is little doubt but it would be well attended; especially if the farmers, for whose particular benefit these fairs were started, will bring forward as much of their produce as possible, including vegetables, butter, eggs, &c., as well as cattle, swine, &c. New-York dealers would then soon find their way to these fairs." We need scarcely express the hope, once more, that this enterprise may be persisted in by the Bedford Farmers' Club, until the question of holding "Market Fairs" is more fairly tested than it has ever yet been in this country.

ALSYKE CLOVER.—Under the head *Varieties of Clover*, in your last no., it is stated that the Alsyke has proved itself to lack hardiness for the climate of Scotland, and the cultivation of it in this country is discouraged. This variety was originated in the cold climate of Sweden, and has been successfully grown in northern Germany and in Canada. I have raised it in Greenfield, Mass., and have a beautiful patch of nearly an acre in southern Ohio. Those largely interested in its culture, say that it is not so likely to be winter killed as red clover, and prefer it both for pasture and fodder, to any other clover. This testimony comes from those who do not seem to know that the blossoms, which are accessible to the honey bee, abound in delicious honey. L. L. LANGSTROTH.

☞ Messrs. HARE & Co., Draughtsmen and Engravers on Wood, 31 Essex St., Strand, London, send us samples of their printing in colors, from wood blocks, showing very superior execution and effect, either in engravings of machinery or for other purposes. They give especial attention to illustrations of Agricultural Implements and Machinery, and for this purpose propose to occupy a stand at the Royal Society's Show.



ALBANY AGRICULTURAL WORKS,

WAREHOUSE AND SEED STORE,

EMERY BROTHERS,

Proprietors,

No. 62 & 64 STATE-STREET

ALBANY, N. Y.,

PATENTEES AND MANUFACTURERS OF

EMERY'S PATENT CHANGEABLE RAILROAD HORSE POWER.

ALSO LEVER POWERS,

For Four, Six and Eight Horses, of new and superior construction, together with a great variety of labor saving

AGRICULTURAL MACHINERY,

ALSO

GENERAL DEALERS IN IMPLEMENTS AND SEEDS.

HORSE POWERS.

IT has ever been the aim of the proprietors to make none but the first class of work, and always use the best materials and workmanship. In the construction of their Horse Powers they have endeavored to adapt them most readily and advantageously to the great variety of purposes, required by the Farmer and Mechanic. The same considerations have guided them in the construction and adaptation of the various Machines made and sold by them, and to be driven by the power, in calculating their various velocities, forces, pulleys and geers required to enable them to operate to their maximum efficiency, which is the great secret of their success.

THRASHING MACHINES

WITH

SEPARATING AND CLEANING ATTACHMENT,

Combined and adapted for all kinds and conditions of grain, &c.

This machine is the greatest success in its line yet produced. It can be operated with two horses as easily, and with equal results, as the ordinary thrashing machine without the cleaning attachment; while its capacity adapts it equally well to the force of four or six horses.

It will thresh perfectly clean from the straw, and clean the grain for market without any wastage in any part of the process.

It is complete in one frame. Very compact and simple—runs light, still, and without any concussion from its moving parts. It has been very extensively used during the past two harvests, and its superiority over any others in market established beyond question, and considering its capacity and cost of construction it is at least fifty per cent. cheaper than any other similar machine in use.

CLOVER MILLS AND CLEANERS.

This is a new Machine comparatively, and is believed to be one of the best Machines for the purpose ever made; can be driven by one, two, or more horses at a high or slow velocity, and do equally good work, and with wet and bad, as well as good condition, of the clover chaff. It cleans the seed and delivers it fit for market at the same operation.

STALK AND STRAW CUTTERS

For Horse Power—a strong and durable Machine, and adjustable to any length of cut.

SAWING MILLS,

With Circular Saws for Cutting Fire-wood, Slitting Boards, Plank, &c., for fencing and building purposes; also with Machine Cross-cut for cutting Logs for Wood, Shingles, Staves, &c.; also Mills for making Shingles.

FEED MILLS

For Grinding all kinds of Grain for Feeding, as well as corn in the ear when desired. Several sizes, and with or without Sieves and Bolts attached.

CIDER MILLS,

For Power and Hand use, with and without Press attached. These Mills and Presses are of a superior style and utility to any others in use.

COTTON GINS,

WITH

COTTON LINT CLEANER AND CONDENSER.

Cotton Gins with Improved feeding hoppers, with 30 to 100 Saws, calculated for one to eight horses. These are superior in finish and adaptation to the wants of the Cotton Grower, to anything of the kind before offered to the public.

THE LINT CONDENSER

Is an attachment suited to any ordinary Cotton Gin; it receives the lint as it is discharged from the gin, condenses it and delivers it compact, ready for the press at one and the same operation, and at the same operation cleanses it from all earthy matter, as sand, dust, &c. It dispenses with the necessity of any lint room and large buildings, as the Gin may be equally as advantageously used in the field as the grain thrasher, and when used in buildings it requires no more additional room than the size of the gin itself occupies. It is also a perfect safeguard against fire, as it is impossible for burning lint to pass through the machine without the fire being extinguished in its passage, thus making this Cotton Gin with its condenser, fire-proof. They have been extensively used in Georgia the past two crops, and the cotton made by them has commanded an advanced price over that ginned by the best machines in use.

AGRICULTURAL IMPLEMENTS,

constantly on hand, embracing a large and selected assortment of Plows, Harrows, Cultivators, Dog Powers, Churns, Cheese Presses; also Forks, Hoes, Shovels, &c., always on hand at the lowest manufacturers' terms.

ILLUMINATED CATALOGUE

The Proprietors have completed their new Catalogue the most complete and beautifully illustrated work ever published by any manufacturer, embracing a great number and variety of finely executed and carefully prepared

ILLUSTRATIONS AND DESCRIPTIONS,

together with ample references and indexes as well as the Prices, Terms of Sale, Weight, Cubic Measurements, Capacity, Directions for use, Durability and Warranty of their

MACHINERY, IMPLEMENTS AND SEEDS.

On receipt of three cents in stamps to prepay postage, it will be sent to all applicants. Local Agencies solicited for the sale of the above Machines.

EMERY BROTHERS,

May 9—w&m2t. No. 62 & 64 State Street, Albany, N. Y

STEEL PLOWS.

We are now manufacturing a superior **Steel Plow**, intended for general use. Some of the advantages it possesses over the cast iron plow, are lightness of draught, durability, and freedom from clogging or sticking in heavy, clayey sticky or tenacious soils. The parts most exposed to wear are so constructed that they may be readily repaired by any blacksmith.

We would refer to the following persons who have them in use: John Johnston, Geneva, N. Y.; Wm. Sumner, Pomaria, S. C.; R. C. Ellis, Lyons, N. Y.; Col. A. J. Summer, Long Swamp, Florida; A. J. Bowman, Utica, N. Y.; A. Bradley, Mankato, Minnesota; A. L. Fish, Litchfield, N. Y.; Volney Owen, Union, Ill.; John Slighter, French Creek, N. Y.

"Mohawk Valley Clipper," No. 1, full trimmed, all steel,.. $15.00
do. do. with cast point,..... 14.00
"Empire," No. 1, with cast point, full trimmed,..... 15.00
For Three-Horse Plows,..... $1.50 extra.
For Adjustable Beams, ... 1.00 do.

We also manufacture Sayre & Klink's Patent Tubular Shank

STEEL CULTIVATOR TEETH.

These Teeth are intended to supersede the old style of wedge teeth and teeth with cast iron heads. They are not liable to become LOOSE in the frame, like the FORMER, nor to BREAK, like the LATTER. They are as readily attached to the frame as any form of tooth.

SAYRES' PATENT HORSE HOE.

This implement is considered to be superior to any other for cultivating Corn, Cotton, Tobacco, Potatoes, Hops, Broom Corn, Nurseries, and all crops planted in rows or drills.

Steel Shovel Blades and Cultivator Points made, and all kinds of Swaging and Plow work done to order.

☞ SEND FOR A CIRCULAR. ☜

REMINGTONS, MARKHAM & CO.,
E. REMINGTON & SONS, BENJAMIN P. MARKHAM, GEO. TUCKERMAN. } Ilion, Herkimer Co., N. Y.

March 21—w&mtf.

EXTRACT OF TOBACCO.—

For dipping Sheep and Lambs, and for destroying all kinds of Vermin on other animals.

The manufacturers of this new and valuable preparation, beg leave to call the attention of Farmers and Graziers to this effectual remedy for destroying Ticks, Lice, and all other insects injurious to animals and vegetation, and preventing the alarming attacks of the Fly and Scab on Sheep.

Its use not only removes the vermin on animals but cleanses and purifies the skin, thereby materially benefitting their general health, and greatly improving wool, both in quality and quantity.

This article completely supersedes that LABORIOUS and DISAGREEABLE work of preparation in your own buildings for sheep-washing, as it is ready at all times, in any climate, and for all descriptions of Sheep, even for Ewes in lamb, and can be furnished at a reduced cost.

FISHER & CO., Sole Agents.
March 14—w&m3mos. 23 Central Wharf, Boston.

BERKSHIRE SWINE,

of unmixed breed, from different litters, at low prices, for sale.
Feb. 7.—w&mtf. WM. J. PETTEE, Lakeville, Conn

IMPORTED DEVON BULL FOR SALE.

The subscriber offers for sale his imported North Devon Bull OMER PASHA (513.) He is seven years old, perfectly healthy, in fine condition, and a sure getter. Received the 1st prize as a yearling, at the Show of the Royal Agricultural Society of England. Price $300. Also a number of

Young Bulls, Cows, and Heifers,

At greatly reduced prices, to suit the times.

C. S. WAINWRIGHT.
April 18—w3tm2t. The Meadows, Rhinebeck, N. Y.

PORTABLE SAW MILLS.—

Capable of sawing one to two thousand feet of boards per day, according to the amount of steam or water-power applied. Price, $300.

HORSE POWERS,

Suitable for driving the above with two to six horses—$100.

PORTABLE STEAM ENGINES

For the above, from $300 to $800, according to size.
April 25—w&m1t. R. L. ALLEN, 189 & 191 Water-St., New-York.

BEARDSLEY'S HAY ELEVATOR OR Horse Power Fork,

Can be used by one or two horses.

Price, including three pulleys and 60 feet of rope, $12.

Liberal discount to dealers.

Rights for sale.

Send for a Circular.

LEVI A. BEARDSLEY.
South Edmeston.
April 1—m3t. Otsego Co., N. Y.

I. T. GRANT & CO., PATENT GRAIN CRADLE.

They are so improved as to be taken down and packed in boxes for transportation. One dozen can be packed in a box of about six cubic feet. We also make the Grapevine Cradle. All of the above are made of the best material and workmanship. For Price List, address

I. T. GRANT & CO.,
May 1—m12t Junction, Rensselaer Co., N. Y.

I. T. GRANT'S PATENT DOUBLE BLAST FAN MILLS.

They will chaff and screen wheat in passing through the mill once, in the most perfect manner, and all kinds of grain and seed. Warranted the very best in use.

Patent Rights for sale of all the Western States.

Address I. T. GRANT & CO.,
May 1—m12t Junction, Rensselaer Co., N. Y.

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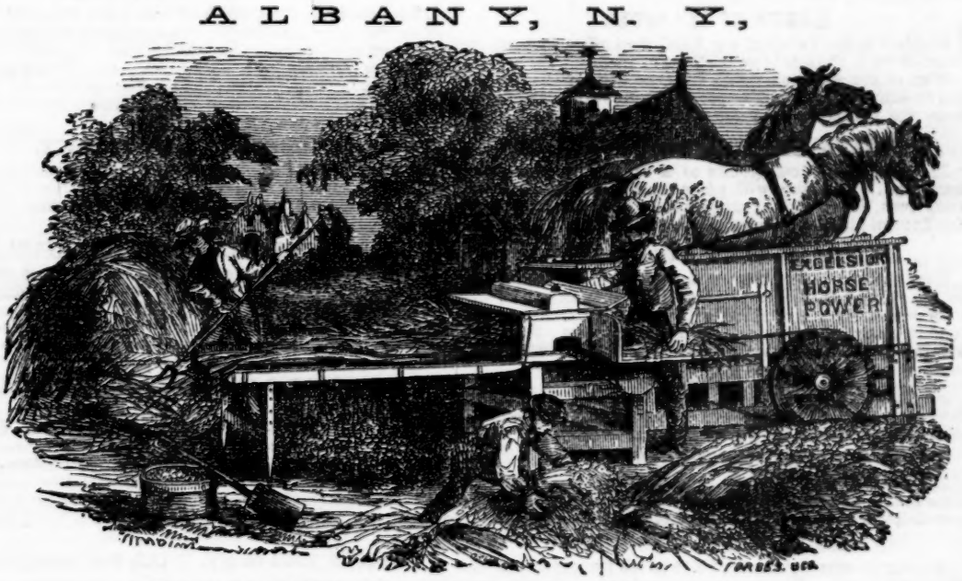
ALBANY, N. Y.,



CHARLES E. PEASE, Proprietor.

Endless Chain Horse Powers, Threshers and Cleaners, Threshers and Separators, Saw Mills and Saws Dog Powers and Clover Hullers, Shares' Patent Coulter Harrows and Hilling, Hoeing & Potato Covering Machines, &c.

Having been engaged in the manufacture of the above machines for several years and by personal superintendence to their getting up, I am enabled to guarantee each to be perfect of its kind, and will WARRANT them to give satisfaction.

Letters of inquiry will be promptly replied to, and liberal inducements will be offered to the trade.

CHAS E. PEASE,
April 21—weow2tm2t* 84 State-st., Albany, N. Y.